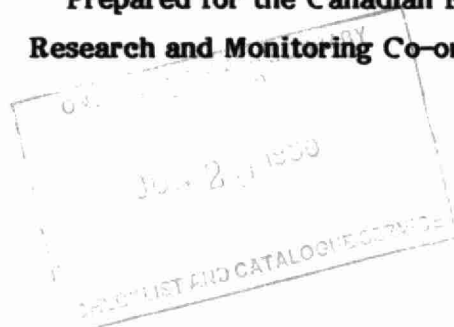


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**A UNIFIED WET DEPOSITION DATA BASE FOR EASTERN  
NORTH AMERICA: DATA SCREENING, CALCULATION  
PROCEDURES, AND RESULTS FOR SULPHATES AND  
NITRATES (1980)**

**Prepared for the Canadian Federal-Provincial  
Research and Monitoring Co-ordinating Committee**



**Prepared by the Unified Deposition Data Base  
Committee (see Acknowledgements)**

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## TABLE OF CONTENTS

		<u>Page</u>
1.0	INTRODUCTION .....	1
2.0	CONCENTRATION AND DEPOSITION CALCULATION PROCEDURES .....	4
3.0	DATA QUALITY CRITERIA .....	7
4.0	RESULTS .....	13
5.0	RECOMMENDATIONS .....	16
APPENDIX A:		
	NETWORK SAMPLING PROTOCOLS AND SCREENING FOR VALID SAMPLES .....	18
APPENDIX B: THE USE OF PRECIPITATION DEPTH FROM STANDARD GAUGE OR SAMPLE COLLECTOR .....		
		21
APPENDIX C:		
	SUGGESTED CRITERIA TO IDENTIFY REGIONALLY UNREPRESENTATIVE SITES .....	23
APPENDIX D: SEA SALT CORRECTION TO PRECIPITATION SAMPLES .....		
		24
APPENDIX E: SULFATE CONCENTRATION/DEPOSITION TABLES .....		
	NITRATE CONCENTRATION/DEPOSITION TABLES .....	27-53 54-79
APPENDIX F: INVENTORY OF WET DEPOSITION SITES .....		
		80

## 1.0 INTRODUCTION

This report contains proposed precipitation data screening and wet deposition calculation procedures, as well as the resulting data set for sulfates and nitrates in Eastern North America for 1980. The procedures were developed by a group of deposition monitoring and mathematical modelling scientists from Canada and the United States at the request of the Canadian Federal-Provincial Research and Monitoring Co-ordinating Committee's Atmospheric Sciences Sub-Group (RMCC/ASSG).

The RMCC/ASSG request was prompted primarily by the current lack of a well-documented North American deposition data set developed using well-defined data screening and wet deposition calculation procedures. A major objective was to construct a data set that mathematical modelers could use for evaluation of their long-range transport models. An immediate need was to provide data for use by the International Sulfur Deposition Model Evaluation Study in early 1985. Although several wet deposition and precipitation concentration maps have been produced by different authors, they have not always been based on the same data and/or data screening and calculation procedures. Consequently, interpretations of differences and similarities of the maps were hindered by the unknown effects of the procedural differences. Thus, a unified and up-to-date wet deposition data set for North America based on common data screening and calculation procedures was planned.

It was recognized that different users of deposition data have different needs which may be reflected in different requirements for data screening and calculation. The procedures proposed here are the result of the joint work of the authors and reflect their collective judgement with respect to mathematical modelers' general needs. Application of the procedures to produce data summaries from 1980 onwards is meant to meet the pressing need for a unified and up-to-date North American wet deposition data set. The authors recognize that alternative data screening and calculation procedures have been (or can be) proposed<sup>1</sup>. Moreover, data summaries prepared for alternative specific objectives may dictate such procedures. It is hoped that the current effort will provide a basis upon which future data screening and calculation procedures can improve.

---

<sup>1</sup> For example, see:

MAP3S/RAINE (1982). The MAP3S/RAINE Precipitation Chemistry Network: Statistical Overview of the Period 1976-1980. Atmospheric Environment, 16, 1603-1631.

U.S.-Canada Memorandum of Intent on Transboundary Air Pollution (1982). Work Group 2, Monitoring and Interpretation Subgroup Final Report No. 2F-I.

Our objective was to produce concentration and deposition information on an annual and seasonal basis. In addition to average values (and also annual totals for deposition), certain statistics were also computed. These are: maximum and minimum values; means (arithmetic and geometric); the 25, 50 and 75 percentiles; and the Kolmogorov-Smirnov D-statistic (to test the distribution of the data for both normality and log-normality). Although ultimately a unified data set on all the major ions is of interest, top priority here was given to sulphates and nitrates.

It was decided not to present the data on isopleth maps, but, rather, in a tabular form. The reason is that interpolation methods for wet deposition data are still at a relatively early stage of development. For purposes of model validation, it was felt that values at individual measurement sites will be adequate.

One of the novel features of the present data set was the attempt to attach a level of confidence to each datum (based primarily on data completeness and site representativeness at the regional level). Due to different sample capture efficiencies on an annual, seasonal and individual sampling period basis, and the differing degrees to which "ideal" siting criteria are satisfied at each site, not all data are of the same quality. For the benefit of data users, we felt it would be very valuable to distinguish between sites yielding data of different quality. We are proposing, therefore, three levels of data quality. "Level 1" data meets the most rigorous screening criteria, and hence is considered to be the best for model evaluation and trend analysis. On the other hand, "level 3" represents what we judge to be the minimum acceptable quality for satisfactory model evaluation. Data not meeting even "level 3" criteria have been excluded from this report.

The data for each site are accompanied by the estimated level of data quality. Eventually, it is hoped that accuracy values can also be developed for each of the three levels. Although at present this information is not available, work is underway at a number of institutions which may allow the accuracy to be estimated within the next year or so.

The ADS Database<sup>2</sup> at Battelle Pacific Northwest Laboratories was used for generating the data sets of interest here. Data came from the following networks (which are routinely depositing data into ADS and which meet certain minimum quality control requirements): in the USA - National Atmospheric Deposition Program/National Trends Network (NADP/NTN), Multistate Atmospheric Power Production Pollution Study (MAP3S), and Utility Acid Precipitation Study Program (UAPSP, formerly EPRI/SURE); and in Canada - Canadian Network for Sampling Precipitation (CANSAP) and Air and Precipitation Monitoring Network (APN), which in 1983 were replaced by the Canadian Air and Precipitation Monitoring Network (CAPMON), and the Acid Precipitation in Ontario Study (APIOS). The

UAPSP, MAP3S, APN, and CAPMON networks collect precipitation on a daily basis, the NADP/NTN network on a weekly and the CANSAP network on a monthly composite basis. The APIOS network collects both on a daily (designated D in the Tables) and a monthly (designated C) basis.<sup>3</sup>

The problem of merging data from different networks into a single, unified data base, which also contains comments on levels of data quality, is not a simple one, since each network uses a different approach to the screening and subsequent reporting of sample data. The approach here was arrived at after a careful consideration of the procedures used by the above networks and is outlined in Appendix A.

Note that although the present report only contains 1980 data, an addendum is planned later this year which will present further data for sulfates and nitrates, for 1981 to 1983.

---

<sup>3</sup> As of January 1982, APIOS monthly sampling was changed to a 28-day collection period.

## **2.0 CONCENTRATION AND DEPOSITION CALCULATION PROCEDURES**

- 2.1 All seasonal/annual concentrations are precipitation depth-weighted average values:

$$\bar{C} = \frac{\sum_{i=1}^n C_i P_i}{\sum_{i=1}^n P_i}$$

where  $\bar{C}$  = the average weighted concentration (seasonal, annual)

$C_i$  = the concentration measured during collection period  $i$  (daily, weekly, monthly)

$P_i$  = the precipitation recorded during collection period  $i$  (see 2.3 below)

$n$  = number of simultaneous valid measurements<sup>4</sup> of precipitation and concentration during the season/year.

- 2.2 All seasonal/annual<sup>5</sup> deposition values are calculated by multiplying the precipitation depth-weighted average concentration by the total precipitation depth for the season/year ( $P_T$ ):

$$D = \bar{C} P_T$$

$$\text{where } P_T = \sum_{i=1}^N P_i$$

and  $N$  = number of collection periods with precipitation amounts for the season/year.

---

<sup>4</sup> For a definition of a valid measurement, see Appendix A, paragraph A.6. Only sample periods where concentration measurements are determined to be valid are included.

<sup>5</sup> For a definition of the seasons, see paragraph 2.6

- 2.3 The precipitation depth is generally obtained from a co-located standard gauge measurement. At some locations, however, there may be a systematic overcatch problem (i.e. the collector depth is greater than the standard gauge depth, and the collection efficiency for the period of interest - see paragraph 3.4.5 - greater than about 110%). This type of situation is relatively rare but, when it does occur, a problem with the standard gauge may be indicated. In this case, the gauge and collector depth data are carefully examined and the deposition is calculated using both the gauge depth as well as the maximum of gauge or collector depths (whichever is greater during each collection period). If the deposition calculated using the maximum of gauge or collector depths is more than 10% greater than the deposition calculated using the gauge depth alone and if there is no obvious problem with either the gauge or collector, then the concentration or deposition is calculated using the greater of the two values.

$$\bar{C} = \frac{\sum_{i=1}^n C_i (P_i \text{ or } P'_i, \text{ whichever is greater})}{\sum_{i=1}^n (P_i \text{ or } P'_i, \text{ whichever is greater})}$$

and

$$D = \bar{C} \sum_{i=1}^N (P_i \text{ or } P'_i, \text{ whichever is greater})$$

where

$P_i$  = standard gauge depth

$P'_i$  = collector depth.

The rationale for considering the greater of the two values to be the more reliable in these cases is outlined in Appendix B. Concentration and deposition values calculated in this way are underlined in the data tables (Tables 1-10).

- 2.4 Precipitation chemistry data are often missing from one or more collection periods. In these cases the annual/seasonal deposition is handled by multiplying the depth-weighted concentration (using the available data) during the year/season by the measured total precipitation depth ( $P_T$ ) during the year/season, determined as recommended in 2.3.

2.5 The precipitation depth data are collected at the precipitation chemistry monitoring site. If depth data are missing from the standard gauge for a particular sampling period, then different procedures have historically been used in Canada and the United States. In Canada, interpolated gauge information from surrounding weather service stations has been generally used; in the U.S., collector depths are employed. We have adopted the current procedures in this report, pending resolution of this question.

## 2.6 Definition of Annual and Climatological Seasons

2.6.1 Preparation of annual and seasonal data summaries requires specific definitions for annual and climatological seasons. Annual periods are here selected to coincide as closely as possible to the calendar year. Seasonal periods are defined to coincide as closely as possible to the climatological seasons, defined here as: winter - December, January, February (contiguous); spring - March, April, May; summer - June, July, August; fall - September, October, November.

2.6.2 The fact that some cumulative networks use collection periods that do not necessarily coincide with the preferred annual and climatological seasonal periods based on calendar months presents a problem. For example, NADP follows a weekly collection period starting on Tuesday and APIOS-cumulative follows a 28-day collection period (as of 1982) starting on Tuesday. Entire collection periods must be allocated to an annual or seasonal period either on a fractional time basis or a fractional precipitation occurrence basis. The latter requires knowledge of when precipitation occurred within a single collection period. Since this information is not available for all networks, the allocation of collection periods (samples) is here computed on a fractional time basis.

2.6.3 The procedure used here for the fractional time allocation of samples to an annual or seasonal period requires that at least fifty percent of the time covered by a collection period be contained in the annual or seasonal period. This applies to both the beginning and end of an annual or seasonal period. For each summary the first and the last date of the period summarized is given in the data tables.

2.7 Valid sample results designated as below the detection limit are included although the way they are handled depends on the statistic calculated. If an average value is calculated, then one-half of the detection limit is used; if a percentile is to be calculated, then the actual detection limit is used. In either case, the number of data values below the detection limit is reported in Tables 1-10.

### **3.0 DATA QUALITY CRITERIA**

- 3.1 Data quality is an important consideration in any wet deposition summary process. Aspects of quality include site representativeness, network operational and sample analysis procedures, screening of individual samples on the basis of available sample comment codes, and data completeness measures for the period being summarized. Network procedures and the screening process applied to individual samples are discussed in Appendix A. Data quality levels discussed below are based on only those samples that meet the screening criteria described in Appendix A.
- 3.2 Each qualifying sulfate and nitrate concentration average and deposition value is assigned an overall data quality level (1, 2 or 3) based on a site representativeness rating and a data completeness rating. Table A shows the assignment.

**TABLE A. Overall Data Quality Level**

		Site Representativeness Rating		
		1	2	3
Data Completeness Rating	1	1	2	3
	2	2	2	3
	3	3	3	3

#### **3.3 Assignment of Site Representativeness Rating**

We have adopted the following approach to account for the uncertainties due to less-than-ideal siting. Regionally unrepresentative sites are given a rating of 3 and are identified using the criteria outlined in Appendix C. These are sites with local influences (e.g. dusty surroundings, significant emission sources within 40 km) known or strongly suspected to have a significant effect on seasonal/annual average wet deposition values.

On the other hand, sites with a rating of 1 do not suffer from any of the interferences listed in Appendix C and are considered to be regionally representative. However, there is a large number of existing sites which fall into neither the "3" nor "1" categories, and for which evaluation of site representativeness is difficult. We have assigned these sites a rating of "2". They have failed on the



basis of one or more of the criteria in Appendix C; however, the severity of the local influences is difficult to assess a priori. We have relied whenever possible on the comments of individual network operators, analyses of the historical data, or site audits, in order to distinguish further between type 2(a) and 2(b) sites. In the former case, those familiar with the site in question, or with historical data from the site, have judged that the local interferences are probably small or insignificant and the sites are potentially representative. On the other hand, "2(b)" sites have more problems associated with them, although those familiar with their surroundings or historical data did not feel that they should clearly go into the "3" category. They were nevertheless judged to be potentially unrepresentative and data from them should be regarded with somewhat less confidence than data from "2(a)" sites. Thus, if the reader sees an overall rating of 2 for a particular datum in Tables 1 to 10, he should consult further the site representativeness rating, to see if a distinction has been made between the 2(a) and 2(b) categories. A datum with the former has a higher confidence associated with it than a datum with the latter (if the data completeness rating is in both cases the same).

It should be noted that detailed site evaluations (based on both the nature of the surroundings and historical data characteristics) are presently underway in a number of networks. Therefore, the ratings assigned in this report, although based on the best information available at the time of writing, should be considered as tentative and subject to possible future revision.

### 3.4 Assignment of Data Completeness Rating

Each annual and seasonal average value is assigned one of three data completeness ratings. A value not meeting the lowest rating requirements is excluded from the data tables. Five data completeness measures are used to determine the data completeness rating. A sixth measure, percent sea salt correction, is used for sulfate values for sites within 100 km of the coast. All six criteria must be met before an individual sulfate or nitrate value is assigned a given data completeness rating. How these measures are used to determine the data completeness rating is given in Tables B and C. A definition of the measures in column 1 of Tables B and C follows in paragraphs 3.4.1 to 3.4.6.

**TABLE B. Data Completeness Rating Criteria  
For Seasonal Sulfate and Nitrate Values**

Data Completeness Measure	Level 1	Level 2	Level 3
%PCL	≥ 95%	≥ 90%	≥ 90%
%TP, VSL, VSMP	≥ 80%	≥ 70%	≥ 60%
%COL EFF			
Winter	≥ 80% (50%)*	≥ 60% (40%)*	≥ 50% (30%)*
Spring, Summer Fall	≥ 80%	≥ 60%	≥ 50%
%SEASALT (sulfate)	≤ 25%	≤ 50%	≤ 75%

\*The bracketed value applies to Canadian data

**TABLE C. Data Completeness Rating Criteria  
For Annual Sulfate and Nitrate Values**

Data Completeness Measure	Level 1	Level 2	Level 3
%PCL			
Annual	≥ 95%	≥ 90%	≥ 90%
Each quarter <sup>+</sup>	≥ 75%	≥ 60%	≥ 50%
%TP, VSL, VSMP			
Annual	≥ 80%	≥ 70%	≥ 60%
Each quarter <sup>+</sup>	≥ 70%	≥ 60%	≥ 50%
%COL EFF			
Annual	≥ 80% (70%)*	≥ 60% (40%)*	≥ 50% (30%)*
Each quarter <sup>+</sup>	Same as in Table B above		
%SEASALT (sulfate)	≤ 25%	≤ 50%	≤ 75%

\* The bracketed value applies to Canadian data.

<sup>+</sup> An annual summary must not only meet the annual data completeness criteria, but also the quarterly criteria for each quarter. The addition of quarterly criteria for % TP, VSL and VSMP to the annual criteria is to insure that adequate data from each quarter is present in the annual summary. The quarterly criteria for % TP, VSL and VSMP in Table C are relaxed from the seasonal criteria in Table B since the emphasis is on insuring adequate data for an annual summary, and not reporting a quarterly summary.

- 3.4.1 Percent precipitation coverage length (%PCL) is defined as the percent of the summary period for which information on whether or not precipitation occurred is available.

$$\%PCL = 100 * (SPL - NDPP) / SPL$$

where SPL = number of days in the summary period

NDPP = number of days when it is not known if precipitation occurred.

If precipitation is known to have occurred during a particular sampling period but no measurement of the amount is available then no knowledge of precipitation is assumed. Total precipitation depth  $P_T$  (defined paragraph 2.2) is the amount of precipitation occurring during the period of precipitation coverage. This data completeness measure does not include any consideration of the availability of a valid precipitation chemistry sample.

- 3.4.2 Percent total precipitation (%TP) is the percent of total precipitation depth measured during the summary period that is associated with valid sulfate or nitrate samples.

$$\%TP = 100 * TPVC / P_T$$

where TPVC = portion of total precipitation depth ( $P_T$ ) associated with valid sample component measurements ( $\sum_{i=1}^n P_i$ , see paragraph 2.1).

- 3.4.3 Percent valid sample length (%VSL) is the percent of the days in the summary period that are associated with valid sample periods.

$$\%VSL = 100 * (NDNP + NDVCMP) / SPL$$

where NDNP = Number of days in summary period associated with sample periods during which no precipitation occurs.

NDVCMP = number of days in summary period with valid sample component measurement on measured precipitation sample.

- 3.4.4 Percent of wet deposition samples that have valid sample component measurements (%VSMP).

$$\%VSMP = 100 * NSVCMP / NSMP$$

where NSVCMP = number of wet deposition samples in summary period that result in a valid sample component measurement.

NSMP = number of wet deposition samples in summary period.

- 3.4.5 Percent collection efficiency (%COL EFF) is the ratio (converted to a percent) of the total sample volume (converted to a depth) to the total precipitation depth.

$$\%COL\ EFF = 100 * EPDVC / ERGVC$$

where EPDVC = sum of depths predicted from sample volume for qualifying samples.

ERGVC = sum of standard gauge depths for qualifying samples.

and qualifying samples are those (a) that have both a co-located standard gauge and sample volume measurement available and (b) that have a valid sample component measurement.

- 3.4.6 Percent sea salt correction (%SEASALT) is the percent of the average sulfate concentration that is estimated to be due to sea salt.

$$\%SEASALT = 100 * (XBAR - XBARC) / XBAR$$

where XBAR = arithmetic mean of sulfate concentrations from uncorrected valid sulfate samples.

XBARC = arithmetic mean of sulfate concentrations from sea salt corrected valid sulfate samples.

The sea salt correction uses sodium or magnesium as tracers of sea salt, as described in Appendix D.

- 3.4.7 The collection efficiency requirement for Canadian winter average values has been relaxed somewhat compared to other seasons due to the generally poorer collector performance for snow sampling. If the 80% requirement for other seasons (level 1) is applied to the winter months when a very large percentage of the precipitation in Canada is in the form of snow, then the data loss is quite large. It is felt that a lower percentage could be accepted for winter because the problems are primarily due to undercatch of snow. The sample collected is expected, therefore, to be representative. The Canadian annual collection efficiency requirement is also relaxed somewhat as a consequence.

#### **4.0 RESULTS**

The data for 1980 are presented in Appendix E (Tables 1-5 for sulfates, and 6-10 for nitrates). Table 1(a), for example, lists by station the annual sulfate concentration and deposition values, as well as the overall data quality levels (and the individual siting and data completeness ratings on which the overall levels are based). If the datum qualified for a sea-salt correction, then the corrected concentration and deposition values are shown below the uncorrected ones. Underlined values were calculated according to paragraph 2.3. The number of collection periods used (N), and valid samples where measurements were below the detection limit (NBDL), are also shown. Table 1(b) presents the statistics for concentration values measured at each site, including the depth-weighted, geometric and arithmetic means (and standard deviations); maximum and minimum values and the 25-, 50- and 75-percentiles; and the Kolmogorov-Smirnov D-statistic for both normal and log-normal distributions (asterisked values indicate that the data distribution is not consistent with a normal, or lognormal, distribution at the 5% significance level).

Appendix F contains a listing of the sites found in Tables 1 to 10, including their latitude, longitude and elevation, and a brief operating history. Also included in this appendix is a set of maps showing the location of each site.

A few further comments are in order:

1. We have proposed here a procedure for data quality assessment based primarily on four considerations:
  - (a) the potential for contamination of the sample by dryfall has been minimized by including only wet collector data;
  - (b) the laboratory which has performed the sample analysis is reputable and has judged the analysis results to be valid;
  - (c) the site is (or is not) regionally representative;
- and (d) the data are (or are not) sufficiently complete to have a high degree of confidence associated with the derived seasonal or annual values.

While few scientists involved in deposition monitoring would dispute the fact that the above are among the major factors involved in an assessment of precipitation data quality, there are other questions which have not been addressed - for example, what about the errors introduced by field evaporation losses from cumulative samplers, or by chemical transformations which may occur between the time of sample collection and chemical analysis? It might be argued that some of these questions are in fact addressed indirectly by the data quality rating scheme proposed here (for example, a cumulative sample with serious evaporation losses would have a low percent collection efficiency, and hence would

tend to get a lower quality rating, than a daily sample): others (such as chemical transformation) are beyond the scope of our mandate, but have been, or are currently being, actively investigated elsewhere. Thus while we recognize that the present procedures are largely based on our current understanding of precipitation sampling and chemistry and may require further revision, or indeed may not necessarily be the best for all users (e.g., those in the environmental effects assessment field may not require such rigorous data screening as proposed here), we hope that the current effort will provide a point of reference for future work, and that, should alternative screening and calculation procedures be used, reasons will also be documented for departing from the present ones.

2. At first sight, the data completeness measures proposed in section 3.4 seem rather complicated. In fact, they reflect the type of problems one encounters when one is actually confronted with a "real" data set, and are motivated by the following questions, all of which require an answer for the data completeness and temporal representativeness to be properly assessed: for what portion of the sampling period do we have a complete knowledge of the occurrence of precipitation (paragraph 3.4.1)?; what portion of the precipitation volume that was collected is associated with a valid chemical analysis (3.4.2)?; further, what percent of the time during the summary period, and what percent of the total number of precipitation samples, do these valid samples represent (3.4.3 and 3.4.4 respectively)?; and finally, what was the collection efficiency, referred to a co-located standard gauge, over the sampling period (3.4.5)? The percentages used in Tables B and C to determine the data completeness were based on the experience of the Unified Wet Deposition Database Committee members with precipitation chemistry data and sampling problems, and reflect their best current collective judgement.
3. It can be seen from the tables that, with the exception of the CANSAP network, more than 50% (in the case of some networks, considerably more) of the sites have been judged to be either regionally representative, or potentially representative. This result reflects the care used in site selection for the more recent networks, which generally have tried to consider most of the sources of error outlined in Appendix C.
4. It will be noted that relatively few sites have received level 1 data quality ratings. This is no doubt partly due to the fact that in 1980 several of the contributing networks were either only starting, or still experiencing start-up problems which will hopefully not be evident in future data summaries. The paucity of level 1 data leads us to again remind the reader that where possible, a distinction has been attempted between level 2a and 2b sites, and that higher confidence should be placed in level 2a data (see the site representativeness column in Tables 1 to 10), if the data completeness assessment is comparable.

5. The major factors involved in the calculations, as detailed in this report, have been adhered to in generating the Tables and Figures herein. In a few cases the considerations involved in the data summary process were much more complicated, but a full discussion was not felt to be justified here (for example, how does one perform a sea salt correction when the sodium or magnesium concentrations are below the detection limit?). For details, please contact one of the authors (A. Olsen).
6. The current report contains only 1980 data. However, an addendum is planned for later this year, which will contain 1981-1983 data for Eastern North America, calculated and evaluated according to the procedures outlined here.



## **5.0 RECOMMENDATIONS AND AREAS FOR FURTHER WORK**

1. We recommend that, for purposes of model evaluation (on a seasonal or annual basis), the data summaries given in this report be used. Furthermore, it is our hope that the procedures used in this report will be adopted by others having similar needs in the future, as the use of a unified and well-documented data set should simplify the task of scientists involved in the development of long-range transport models and emission reduction scenarios.
2. We recommend that the concept of overall data quality levels, including site representativeness and data completeness ratings, proposed here be retained in future data summaries, and that work continue to refine assignment of site representativeness criteria and data completeness measures. We also recommend that efforts be made to develop ranges of data accuracy associated with each data quality level. Work in this area is already underway at a number of institutions.
3. In many applications of deposition data, it would be very useful to have objectively analyzed deposition fields rather than values at discrete monitoring stations, as in this report. We recommend that efforts be intensified in the search for an optimum objective analysis technique for generating atmospheric deposition fields.
4. Some of the siting ratings arrived at in this report (paragraph 3.2 and Appendix C) are only tentative: all of them apply to the situation during or before 1984. These ratings should be re-evaluated periodically, to ensure that they represent correctly current data.

In addition, the present work has revealed a number of problems which require further attention.

5. Procedures for handling missing precipitation depth data (see paragraph 2.5) are different in Canada and the United States. While we have stayed with the current procedures in each country in this report, the pros and cons of the Canadian and United States approaches should be assessed, and a uniform procedure adopted. Also, we recommend that rain gauges be kept operational all the time at precipitation chemistry monitoring sites (this has not been the case in the past with some networks).

6. The Canadian and U.S. standard gauges differ in their efficiency for collecting snow (under windy conditions, the U.S. gauges are generally less efficient than Canadian gauges). This could cause a systematic bias in the data between the two countries, especially in the winter season. Although many of the monitoring sites in the northern U.S. tend to be in sheltered locations where wind effects are minimized, an evaluation of the differences thus caused is recommended.

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## APPENDIX A

### NETWORK SAMPLING PROTOCOLS AND SCREENING FOR VALID SAMPLES

- 1      Precipitation chemistry monitoring networks collect precipitation samples in the field, transport them to an analytical laboratory for chemical analysis and report the sample results for others to use. Network specific protocol procedures are implemented to ensure that data are collected, analyzed and reported as consistently as possible. Each network uses a different approach to the screening and subsequent reporting of sampling data. For example, some networks have rigid screening procedures which a sample must pass before any data are reported. Other networks may use essentially the same screening procedures but will report the sample data accompanied by appropriate note codes even when the sample does not meet the screening criteria. These differences in network screening and reporting of sample data must be considered when data from multiple networks are combined for an analysis.
- 2      The following is a discussion of the data screening and reporting procedures adopted by the networks included in this report (APN, APIOS, CANSAP, MAP3S, NADP and UAPSP). The information is obtained from documentation available from each network and discussions with network personnel directly knowledgeable about their screening and reporting procedures. Most of the information is used in the transfer of each network's data to a common data format for wet deposition data used in the ADS data base.
- 3      Each network has a chemical analysis laboratory which performs sample analyses and checks the reasonableness of the sample analysis results using only information available from the analysis. Some networks may use additional information to initiate a re-analysis. For the current purpose it is sufficient to state that each network receives data from a chemical analysis laboratory which has been subjected to internal laboratory checks. The results reported from the laboratory are assumed to represent the ion species concentration in the sample as received by the laboratory. All chemical analysis laboratories used by the networks participate in interlaboratory comparison studies. Laboratory sample analysis protocols are available from individual network coordinators.
- 4      Each network then combines the sample results from the laboratory with supporting comments and flags associated with the sample collection effort. This includes information from the time of field collection until the sample is analyzed. The information differs widely across the networks, especially as to how much is recorded in a network data base for others to use. The ADS data base incorporates all of the comments, codes and flags that are

available from each network in a computerized form. It is assumed that the data sent to ADS by each network have been subjected to an internal network individual sample screening process. That process may result in samples being declared invalid/suspect and either not being reported or being appropriately coded.

- 5 Valid sample criteria have been designed to incorporate each network's comments, codes and flags into the decision process of determining whether an individual wet deposition sample result is to be included or excluded from a summary. The discussion on screening for valid samples is stated in terms of the ADS data base common record format with some reference to network specific codes as necessary for clarification.
- 6 Valid sample criteria applicable to the annual and seasonal summaries are:
  - a. All sampling periods for which it is known that no precipitation occurred are considered valid sample periods. This applies mainly to weekly, monthly and 28-day sampling protocols. For event and daily sampling protocols the absence of a sample record for a day implies that no precipitation occurred (this assumption is not always valid for the earlier data).
  - b. The wet deposition sample must be a wet-only sample. All samples identified as bulk, partially bulk or undefined are invalid.
  - c. Wet deposition samples that have insufficient precipitation to complete a chemical analysis for a specific ion species are invalid for that specific ion species. Event/daily samples are most likely to have this occur.
  - d. An individual ion species concentration accompanied by a comment code designating the measurement to be "suspect" or "invalid" is declared an invalid sample. Deletion of the ion species concentration by the network for the same reason has the same effect.
  - e. The actual sampling period for a wet deposition sample must be close to the network's protocol sampling period. Specifically, the following conditions lead to an invalid sample:
    - For NADP, actual DAYS-IN-SAMPLE less than 6 or greater than 8. This includes all NADP samples coded "LD" with measured precipitation.
    - For APIOS-C, actual DAYS-IN-SAMPLE less than 21 or greater than 35.

- For CANSAP, actual DAYS-IN-SAMPLE less than 22, or greater than 36.

7 All networks include note codes which are informational in nature. Some codes denote reasons why sample results are not available or reported. Other codes describe conditions present in field, sample transit and sample receipt. Unless explicitly stated elsewhere, these note codes are not used in determining whether or not a sample is valid. The basic premise is that each network has screened individual sample results for possible contamination. If a sample result passes their screening, it is assumed that possible sample contamination indicated by field or lab comments did not materially affect the sample ion species concentrations. Insufficient information is available from the networks to subject all samples to the same sample screening process.

## APPENDIX B

### THE USE OF PRECIPITATION DEPTH FROM STANDARD GAUGE OR SAMPLE COLLECTOR

Past experience has shown that on occasion, the standard gauge depth will be either equal to or greater than the depth measured by a co-located precipitation chemistry collector. The present discussion is concerned with the relatively few occasions when there is a systematic overcatch of the collector and where there is no clearly evident reason for the discrepancy. In these cases, it is recommended that the maximum of either gauge or collector depth during each collection period be used, for the following reasons:

1. Precipitation gauges are subject to measurement errors due to evaporation, adhesion, inclination and splash and are significantly influenced by wind and the nature of the precipitation itself (Rodda, 1971; Israelson, 1967). After a comprehensive review of precipitation measurement, Israelson (1967) states that gauge errors are apparently almost always in a negative direction (causing undercatch) and that it has become common practice, when comparing gauges, to designate the gauge which has the largest catch as the most accurate. While there is some disagreement with this practice (McGuinness, 1966), there is general agreement that no one gauge measures "true rainfall" and that sometimes one gauge catches the most precipitation while other times another gauge does (Israelson, 1967).

The reviews of precipitation measurement by Israelson (1967) and Larson (1971) described several studies which show that all gauges typically caught less than pit gauges (e.g. Neff and Hamon, 1965) and lysimeters (e.g. McGuinness, 1966). These and other studies indicate that airflow over gauges is the most important factor affecting catch efficiency. Wind effects are particularly important for snow collection and Goodison (1978) has shown that significant differences exist between the catch of Canadian Nipher-shielded snow gauges (higher catches) and the catch of universal gauges with alter shields (lower catches). The differences in catch were largely attributed to different aerodynamic characteristics over the collection orifices, and increased with wind speed.

The facts are that:

- (a) most gauges undercatch (compared to ground-level measurements);
- (b) gauge catch efficiencies are highly dependent on wind effects and
- (c) some gauges are more efficient than others (those mounted lower to the ground to reduce wind effects, or nipher shielded snow gauges).

2. Available data show that, on occasion, precipitation chemistry samplers (such as the Aerochem Metrics sampler) catch more than the standard gauges. Based on the previous discussion, this could be due to several reasons (wind effects, orifice size, height, etc.). Given that both the sampler and the standard gauge typically undercatch, it seems reasonable to accept the highest catch as the most accurate. This is particularly true if the differences between the gauges are due to natural variability as opposed to known, man-made errors (e.g. spilling, misreading).

While there is a well-conceived reluctance on the part of statisticians to accept a maximum value of a measured parameter without careful evaluation and justification, evidence suggests that the maximum measurement of precipitation at a site may be more accurate. Also, while "standard gauge" measurements can be considered as "reference values", variations in the siting, shielding, type, maintenance, orifice size and precipitation characteristics across precipitation monitoring networks suggest that standard gauge data can be highly variable and prone to major uncertainties. Thus, it is not altogether surprising that the precipitation chemistry samplers occasionally overcatch the standard gauges and that this should be compensated for.

In view of the above-mentioned uncertainties in standard gauge depths, it seems reasonable to accept the larger of the gauge or collector depth as the more accurate, in cases where there is evidence of a systematic collector overcatch.

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## **APPENDIX C**

### **SUGGESTED CRITERIA TO IDENTIFY REGIONALLY UNREPRESENTATIVE SITES**

There are a number of difficulties involved in assessing errors due to poor siting. We have elected to distinguish between regionally representative, unrepresentative, and potentially representative or unrepresentative sites. The distinction between these types is discussed in Section 3.2.

If one or more of the criteria below were met, the location of the network site was generally considered to be unrepresentative for monitoring regional-scale acid deposition and the data from that site were given a rating of "3", unless an examination of the historical data from the site, or the judgement of those familiar with the site, indicated that the local interferences were small or insignificant. (Note that these criteria would not necessarily apply for data users whose interest is in the sub-regional scale).

1. There is a continuous industrial source, a town or suburban area located within 10 kilometres.
2. There is a major point source (greater than 10,000 tons sulfur dioxide or nitric oxide per year) located within 50 kilometres; or the sum of point source emissions within 50 kilometres is greater than 10,000 tons per year.
3. There is a surface pollutant storage facility (e.g. salt pile) located within 100 metres.
4. There are transportation sources, furnaces or incinerators located within 100 metres.
5. There is cultivation or other agricultural activity within 500 metres.
6. Buildings, trees, etc., impinge on the cone defined by a 45 degree angle above the horizontal plane and centred at the site (30 degrees is considered optimal but 45 degrees is the highest acceptable angle).
7. The local area is known to be dusty due to poor ground cover.



## APPENDIX D

### SEA SALT CORRECTION TO PRECIPITATION SAMPLES

Sea salt contains large amounts of  $\text{Na}^+$ ,  $\text{Cl}^-$ ,  $\text{Mg}^{++}$ ,  $\text{S}$ ,  $\text{Ca}^{++}$  and  $\text{K}^+$ , in relatively constant ratios. When sea salt aerosols enter precipitation samples, they raise the concentrations of these ions over those which existed prior to the input of sea salt. In order to determine the  $\text{SO}_4^{=}$  concentration in precipitation independent of the influence of sea salt, it is necessary to correct the measured  $\text{SO}_4^{=}$  concentration for the sea salt contribution. Generally, this is done by subtracting from the measured  $\text{SO}_4^{=}$  concentration the amount of  $\text{SO}_4^{=}$  predicted to be due to sea salt, as calculated as the product of the  $\text{Na}^+$  concentration and the ratio of  $\text{SO}_4^{=}$  to  $\text{Na}^+$  concentrations in bulk sea water (see, for example, the report "The OECD Programme on Long Range Transport of Air Pollutants - Measurements and Findings", Second Edition, OECD, Paris, 1979).

This method assumes that the  $\text{Na}^+$  concentration in the precipitation sample is dominated by the sea salt contribution and that the ratio of  $\text{SO}_4^{=}$  to  $\text{Na}^+$  in bulk sea water is the same as in the sea salt aerosols which were scavenged into the sample and generated from sea water. Although this latter assumption has been questioned, it is the most practical assumption to make at this time (in the absence of special studies on sea aerosol composition at each precipitation monitoring site). The former assumption, however (that all  $\text{Na}^+$  in the precipitation is due to sea salt alone), becomes less valid with distance from the coastline, and with the presence of other confounding influences such as road salt, road dust and human contamination. Indeed, a quick perusal of CANSAP data at Sable Island (completely surrounded by sea water), Shelburne (located near the Atlantic coastline), and St. John (located near the coastline but also near urban influences) shows that the ratios of the major ions in precipitation samples increasingly differ from those in bulk sea water as the external influences increase. Consequently, we are not recommending sea salt corrections for samples collected more than 100 km inland.

It is useful, therefore, to check that the value of  $\text{Na}^+$  in the precipitation sample collected at a coastal site is the best value to use as the basis for the sea salt correction of  $\text{SO}_4^{=}$ . The following section suggests a method for doing this. It involves comparing the ratios of several ions ( $\text{Na}^+$ ,  $\text{Cl}^-$ ,  $\text{Mg}^{++}$ ) measured in the precipitation samples to the same ratios in sea water in order to see which ions provide the best indication of sea salt influence.

1. Let

$$A = \frac{\frac{[Mg^{++}]}{[Na^+]}}{\frac{[Mg^{++}]}{[Na^+]}} \frac{\text{precipitation measured}}{\text{sea salt}}$$

$$B = \frac{\frac{[Na^+]}{[Cl^-]}}{\frac{[Na^+]}{[Cl^-]}} \frac{\text{precipitation measured}}{\text{sea salt}}$$

$$C = \frac{\frac{[Mg^{++}]}{[Cl^-]}}{\frac{[Mg^{++}]}{[Cl^-]}} \frac{\text{precipitation measured}}{\text{sea salt}}$$

2. If  $0.75 \leq A \leq 1.25$

Then correct for sea salt using  $[Na^+]$

$$\text{i.e. } [SO_4^{=}]_{\text{corrected}} = [SO_4^{=}]_{\text{measured}} - 0.25 [Na^+] \dots (1)$$

where all concentrations are in (mg/l).

3. If  $A \leq 0.75$  or  $\geq 1.25$

Then check to see whether it is more appropriate to correct using  $Na^+$  or  $Mg^{++}$ , with the procedure outlined below:

Calculate B and C

(a) If  $B \leq 0.75$  or  $\geq 1.25$  but  $0.75 \leq C \leq 1.25$

Then the reason that  $A \leq 0.75$  or  $\geq 1.25$  is probably because  $[Na^+]$  is inaccurate.

Therefore correct for sea salt using  $Mg^{++}$

$$\text{i.e. } [SO_4^{=}]_{\text{corrected}} = [SO_4^{=}]_{\text{measured}} - 2.09 [Mg^{++}] \dots (2)$$

- (b) If  $0.75 \leq B \leq 1.25$  and  $C \leq 0.75$  or  $\geq 1.25$

Then, the reason that  $A \leq 0.75$  or  $\geq 1.25$  is probably because  $[Mg^{++}]$  is inaccurate.

Therefore correct for sea salt using  $[Na^+]$  i.e. Eq (1)

- (c) If  $0.75 \geq B, C \geq 1.25$

or  $0.75 \leq B, C \leq 1.25$

Then there are strong confounding influences on the data.

Therefore if B is closer to 1.0 than C, then base the sea salt correction on  $[Na^+]$  (i.e. Eq 1).

If C is closer to 1.0 than B, then base the correction on  $[Mg^{++}]$  (i.e. Eq 2).

**APPENDIX E**

**MONTHLY AND SEASONAL SULFATE AND NITRATE CONCENTRATION  
AND WET DEPOSITION TABLES FOR 1980**

Table 1(a)

1980 Annual Unified Data Summary

30-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	%	%	%	Wtd	SO4	%	Total
	First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSM	Col	N	BDL	Mean	Dep	Sea	Salt	Precip
										Eff			mg/l	g/m2	Correction		cm
Delaware																	
MAP3s/PCN																	
Lewes	Jan 1 80	Jan 1 81	2	2A	2	100	99	97	84	87	62		2.62	2.40			91.6
												1	2.27	2.08	8		
Illinois																	
NADP																	
Dixon Springs	Jan 2 80	Dec 30 80	3	2B	3	93	100	71	77	91	37		3.28	2.78			84.6
Indiana																	
UAPSP																	
Roanoke	Jan 1 80	Jan 1 81	2	2A	2	100	97	93	79	92	90		2.95	2.59			88.0
Rockport	Jan 1 80	Jan 1 81	3	3	1	100	100	99	97	94	76		2.82	2.60			92.5
New Hampshire																	
NADP																	
Hubbard Brook	Jan 2 80	Dec 30 80	2	1	2	90	99	85	93	99	43		2.46	2.14			86.8
New York																	
NADP																	
Aurora	Jan 3 80	Dec 30 80	2	2A	2	90	100	85	94	93	44		3.91	3.11			79.6
Knobbit	Jan 1 80	Dec 30 80	2	2A	2	90	89	77	87	96	40		2.91	1.88			64.8
MAP3s/PCN																	
Brookhaven	Jan 1 80	Jan 1 81	2	2B	1	100	99	98	88	91	57		2.51	2.03			81.1
													2.31	1.87	4		
Ithaca	Jan 1 80	Jan 1 81	2	2A	1	100	98	98	94	94	74		2.64	2.50			94.9
Whiteface	Jan 1 80	Jan 1 81	1	1	1	100	98	97	90	113	81		2.62	2.47			94.5
North Carolina																	
NADP																	
Clinton Station	Jan 2 80	Dec 30 80	2	2A	2	98	100	88	90	89	45		1.85	2.15			116.5
Coveeta	Jan 2 80	Dec 30 80	2	2A	2	94	99	87	94	93	44		1.74	2.74			157.5
Leviston	Jan 2 80	Dec 30 80	2	2A	2	94	95	85	90	86	44		2.25	1.96			87.3
												1	2.15	1.87	4		
Piedmont Station	Jan 2 80	Dec 30 80	2	2A	1	96	99	81	84	94	42		3.02	3.02			99.9
UAPSP																	
Raleigh	Jan 1 80	Jan 1 81	3	3	1	100	95	96	82	87	68		1.88	1.77			94.1
Ohio																	
NADP																	
Caldwell	Jan 2 80	Dec 30 80	2	2B	2	94	97	88	94	103	45		4.14	4.04			97.4
Delaware	Jan 2 80	Dec 30 80	2	2A	1	96	100	88	92	93	46		3.98	4.32			108.6
Wooster	Jan 2 80	Dec 30 80	3	3	1	96	97	87	90	95	44		3.64	3.30			90.6
UAPSP																	
Zanesville	Jan 1 80	Jan 1 81	3	3	2	100	99	99	95	88	95		3.27	4.35			133.2
Pennsylvania																	
NADP																	
Leading Ridge	Jan 2 80	Dec 30 80	2	1	2	92	100	90	98	92	47		3.39	3.13			92.5
MAP3s/PCN																	
Penn State	Jan 1 80	Jan 1 81	2	2B	1	100	100	99	95	122	75		3.22	2.77			86.0
UAPSP																	
Scranton	Jan 1 80	Jan 1 81	2	2A	1	100	100	100	100	99	81		2.60	1.67			64.2

Note: The annual data completeness level also depends on the quarterly data completeness levels

## 1980 Annual Unified Data Summary

30-Jun-1985  
Page 2

## Sulfate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	SO4	%	Sea Salt	Total
	First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col Eff		BDL	Mean mg/l	Dep g/m2	Correction		Precip cm
South Carolina																	
NADP																	
Clemson	Jan 2 80	Dec 30 80	3	3	2	90	100	79	87	99	40		1.93	2.38			123.3
Virginia																	
MAP3s/PCN																	
Virginia	Jan 1 80	Jan 1 81	3	2A	3	99	83	93	74	93	60		2.50	2.11			84.5
West Virginia																	
NADP																	
Parsons	Jan 2 80	Dec 30 80	2	2A	1	96	100	96	100	92	50		3.56	4.36			122.3
UAPSP																	
Lewisburg	Jan 1 80	Jan 1 81	2	2A	2	100	97	98	94	96	78		2.16	1.60			74.2
New Brunswick																	
CANSAP																	
Acadia Fes	Dec 31 79	Jan 1 81	3	3	1	100	100	100	100	88	12		2.17	2.74			126.5
Charlo	Dec 31 79	Dec 31 80	3	3	3	100	100	100	100	72	12		2.27	2.97			130.5
													2.12	2.76		7	
St. John	Dec 31 79	Jan 1 81	3	3	2	100	100	100	100	80	12		2.78	3.87			139.2
													2.53	3.52		10	
Newfoundland																	
CANSAP																	
Goose	Dec 31 79	Jan 1 81	2	2B	2	100	92	92	92	76	11		.98	1.12			114.6
													.93	1.06		4	
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	Dec 31 79	Jan 1 81	2	2A	2	100	92	91	92	100	11		1.71	1.97			115.1
													1.52	1.75		8	
Truro	Dec 31 79	Dec 31 80	3	3	2	100	100	100	100	75	12		2.71	2.91			107.2
													2.50	2.68		8	
Ontario																	
CANSAP																	
Dorset (a)	Jan 2 80	Dec 31 80	3	1	3	100	87	82	77	78	10		2.62	3.31			126.4
Harrow	Dec 31 79	Dec 31 80	3	3	3	100	100	100	100	79	12		4.84	4.73			97.7
Kingston	Dec 31 79	Dec 31 80	3	3	3	100	78	83	77	79	10		3.92	4.05			103.3
Mount Forest (a)	Dec 31 79	Jan 1 81	3	3	2	100	93	92	92	77	11		4.20	4.07			96.8
Simcoe	Dec 31 79	Jan 1 81	3	3	2	100	92	91	92	89	11		4.02	3.49			87.0
APN																	
Chalk River	Jan 1 80	Jan 1 81	2	2A	1	100	98	96	92	94	142		2.82	2.70			95.8
Long Point	Jan 1 80	Jan 1 81	3	3	1	100	98	96	88	95	99		4.01	3.51			87.5
Quebec																	
CANSAP																	
Chibougamau	Dec 31 79	Dec 31 80	3	3	3	100	100	100	100	66	12		1.55	1.54			99.2
Mitchequon	Dec 31 79	Jan 1 81	3	2B	3	100	97	91	92	70	11		.98	.83			84.7
Quebec City	Dec 31 79	Jan 1 81	3	3	2	100	100	100	100	83	12		3.87	4.48			115.7

Note: The annual data completeness level also depends on the quarterly data completeness levels

Table 1(b)

## 1980 Annual Unified Data Summary

30-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	Concentration												K-S	
				N	N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles 50% mg/l	75%	Max	D-Statistic Gau	Log
Delaware																	
MAP3a/PCN																	
Lewes	2	2A	2	62		2.62	2.43	.74	3.11	2.26	.31	1.44	2.8	4.0	11.5	.153*	.109
Illinois																	
NADP																	
Dixon Springs	3	2B	3	37		3.28	3.53	.60	4.27	3.15	1.39	2.30	3.1	5.1	16.4	.180*	.140
Indiana																	
UAPSP																	
Roanoke	2	2A	2	90		2.95	2.87	.63	3.46	2.22	.33	1.76	3.0	4.7	12.9	.126*	.060
Rockport	3	3	1	76		2.82	3.00	.64	3.79	3.78	.42	2.02	2.9	4.3	31.5	.213*	.066
New Hampshire																	
NADP																	
Hubbard Brook	2	1	2	43		2.46	2.15	.77	2.80	1.99	.40	1.28	2.2	3.7	9.4	.134	.114
New York																	
NADP																	
Aurora	2	2A	2	44		3.91	3.92	.61	4.56	2.36	.74	2.77	4.4	5.7	12.6	.100	.148*
Knoblit	2	2A	2	40		2.91	2.85	.87	3.92	3.05	.31	1.64	3.1	5.9	13.0	.200*	.092
MAP3a/PCN																	
Brookhaven	2	2B	1	57		2.51	2.74	.72	3.59	3.06	.68	1.63	2.8	4.5	16.3	.174*	.068
Ithaca	2	2A	1	74		2.64	2.34	.97	3.44	3.42	.07	1.61	2.6	4.1	23.0	.217*	.112*
Whiteface	1	1	1	81		2.62	2.27	.77	3.01	2.39	.26	1.30	2.5	3.9	11.5	.159*	.068
North Carolina																	
NADP																	
Clinton Station	2	2A	2	45		1.85	2.15	.76	2.78	2.21	.18	1.50	2.1	3.6	12.2	.176*	.096
Coweeta	2	2A	2	44		1.74	2.08	.62	2.58	2.16	.75	1.24	1.8	3.2	13.5	.199*	.099
Lewiston	2	2A	2	44		2.25	2.63	.89	3.93	4.93	.19	1.42	2.7	4.9	31.1	.264*	.104
Piedmont Station	2	2A	1	42		3.02	3.72	.73	4.92	4.43	1.00	2.15	3.7	5.5	25.9	.225*	.075
UAPSP																	
Raleigh	3	3	1	68		1.88	2.13	.71	2.77	2.55	.47	1.38	2.1	3.3	16.9	.204*	.083
Ohio																	
NADP																	
Caldwell	2	2B	2	45		4.14	3.76	.75	4.88	4.12	.36	2.53	3.7	6.2	25.4	.159*	.104
Delaware	2	2A	1	46		3.98	3.54	.62	4.15	2.70	.22	2.72	3.7	4.9	19.0	.183*	.132*
Wooster	3	3	1	44		3.64	3.61	.52	4.08	2.04	1.05	2.37	3.9	5.3	10.5	.086	.084
UAPSP																	
Zanesville	3	3	2	95		3.27	3.21	.61	3.85	2.49	.70	2.18	3.0	5.3	16.8	.172*	.070
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	47		3.39	3.44	.77	4.42	3.07	.48	1.88	3.8	6.3	17.5	.107	.106
MAP3a/PCN																	
Penn State	2	2B	1	75		3.22	3.05	.89	4.33	4.36	.28	1.92	3.6	5.3	31.7	.176*	.115*
UAPSP																	
Scranton	2	2A	1	81		2.60	3.09	.74	3.88	2.56	.21	2.09	3.4	5.1	13.2	.148*	.079

Note: The annual data completeness level also depends on the quarterly data completeness levels

## 1980 Annual Unified Data Summary

30-Jun-1985  
Page 2

## Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
South Carolina																	
NADP																	
Clemson	3	3	2	40		1.93	2.23	.58	2.58	1.40	.37	1.61	2.4	3.3	7.6	.122	.096
Virginia																	
MAP3s/PCN																	
Virginia	3	2A	3	60		2.50	2.70	.86	3.77	3.17	.43	1.27	2.8	4.9	15.4	.146*	.082
West Virginia																	
NADP																	
Parsons	2	2A	1	50		3.56	3.60	.63	4.33	2.90	.50	2.52	3.5	5.3	17.4	.166*	.050
UAPSP																	
Lewisburg	2	2A	2	78		2.16	2.13	.76	2.76	2.00	.16	1.29	2.1	3.8	9.8	.137*	.056
New Brunswick																	
CANSAP																	
Acadia Res	3	3	1	12		2.17	1.91	.58	2.22	1.30	.62	1.35	1.8	3.0	5.3	.203	.116
Charlo	3	3	3	12		2.27	2.25	.61	2.55	1.05	.40	2.10	2.4	3.3	4.4	.168	.288*
St. John	3	3	2	12		2.78	2.72	.38	2.89	1.01	1.50	1.85	3.0	3.5	4.6	.145	.186
Newfoundland																	
CANSAP																	
Goose	2	2B	2	11		.98	1.04	.32	1.10	.46	.80	.80	0.9	1.2	2.4	.325*	.240
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	2	2A	2	11		1.71	1.83	.54	2.08	1.04	.80	1.20	1.9	3.0	4.0	.136	.146
Truro	3	3	2	12		2.71	2.68	.51	2.96	1.25	.80	2.00	2.6	4.3	4.7	.175	.199
Ontario																	
CANSAP																	
Dorset (a)	3	1	3	10		2.62	2.66	.47	2.93	1.31	1.10	2.05	2.3	4.1	5.3	.257	.188
Harrow	3	3	3	12		4.84	5.22	.39	5.71	3.21	3.90	4.05	4.6	5.4	15.2	.348*	.294*
Kingston	3	3	3	10		3.92	4.35	.45	4.76	2.07	2.00	3.15	3.9	7.2	7.7	.244	.174
Mount Forest (a)	3	3	2	11		4.20	4.05	.50	4.51	2.16	1.70	2.70	4.0	5.9	9.1	.140	.132
Simcoe	3	3	2	11		4.02	4.16	.36	4.41	1.61	2.20	3.30	4.3	5.5	7.9	.141	.092
APN																	
Chalk River	2	2A	1	142		2.82	2.83	.78	3.82	3.26	.30	1.60	2.8	5.0	20.2	.166*	.031
Long Point	3	3	1	99		4.01	3.89	.61	4.66	3.04	.70	2.50	4.1	6.2	20.6	.111*	.074
Quebec																	
CANSAP																	
Chibougamau	3	3	3	12		1.55	1.44	.45	1.57	.66	.70	.91	1.5	2.0	2.7	.171	.156
Nitchequon	3	2B	3	11	1	.98	.75	.82	.94	.60	.20	.60	0.9	1.2	2.4	.188	.151
Quebec City	3	3	2	12		3.87	4.15	.35	4.40	1.70	2.50	3.10	4.1	5.1	8.8	.174	.134

Note: The annual data completeness level also depends on the quarterly data completeness levels



Table 2(a)

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Period Summarized		Overall	Site Data	%	%	%	%	%	N	N	Wtd	SO4	% Sea	Salt	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	BDL	Mean	Dep	Correction		Precip
	Date	Date								Eff		mg/l	g/m2			cm
Delaware																
MAP3s/PCN																
Leves	Dec 1 79	Mar 1 80	2	2A	2	100	97	96	78	79	14	1.58	.26			16.5
												1.42	.23		7	
UAPSP																
Indian River	Dec 1 79	Mar 1 80	3	3	2	100	96	95	75	96	15	1.93	.36			18.4
												1.76	.33		10	
Georgia																
NADP																
Georgia Station	Dec 4 79	Mar 4 80	2	2A	1	100	100	100	100	123	13	1.96	.43			22.0
Illinois																
NADP																
Bondville	Dec 4 79	Mar 4 80	2	2A	2	92	99	85	92	70	11	3.33	.31			9.3
Dixon Springs	Nov 27 79	Mar 4 80	2	2B	2	100	94	70	71	90	10	3.57	.65			18.1
Indiana																
UAPSP																
Fort Wayne	Dec 1 79	Mar 1 80	2	2A	2	100	95	96	76	60	13	2.18	.25			11.3
Rockport	Dec 1 79	Mar 1 80	3	3	1	100	99	99	94	98	17	2.43	.31			12.6
Massachusetts																
UAPSP																
Montague	Dec 1 79	Mar 1 80	2	2A	1	100	100	100	100	98	7	1.44	.15			10.2
Minnesota																
NADP																
Marcell	Dec 4 79	Mar 4 80	2	2B	2	100	99	77	75	62	9	1.16	.08			7.2
New York																
NADP																
Huntington	Dec 4 79	Mar 4 80	2	2B	2	92	100	85	92	133	11	1.76	.19			10.7
MAP3s/PCN																
Brookhaven	Dec 1 79	Mar 1 80	2	2B	1	100	99	99	91	89	10	2.36	.36			15.2
												2.12	.32		11	
Ithaca	Dec 1 79	Mar 1 80	2	2A	2	100	100	100	100	71	15	1.37	.19			14.1
Whiteface	Dec 1 79	Mar 1 80	2	1	2	100	86	96	71	155	10	1.76	.23			13.2
North Carolina																
NADP																
Clinton Station	Dec 4 79	Mar 4 80	2	2A	2	100	100	100	100	70	13	1.92	.44			23.1
Coweeta	Dec 4 79	Mar 4 80	2	2A	1	100	100	100	100	89	13	1.70	.51			29.9
Lewiston	Dec 4 79	Mar 4 80	2	2A	1	100	83	85	85	87	11	1.78	.46			25.9
												1.71	.44		4	
Piedmont Station	Dec 4 79	Mar 4 80	2	2A	1	100	93	85	85	93	11	2.10	.36			17.4
UAPSP																
Raleigh	Dec 1 79	Mar 1 80	3	3	2	100	78	93	70	88	14	1.68	.34			20.3
Ohio																
NADP																
Delaware	Dec 4 79	Mar 4 80	2	2A	2	92	100	85	92	84	11	2.64	.36			13.6
Wooster	Dec 4 79	Mar 4 80	3	3	2	92	99	85	92	100	11	3.19	.32			10.0
UAPSP																
Zanesville	Dec 1 79	Mar 1 80	3	3	1	100	98	98	86	91	12	2.28	.29			12.8

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 2

Sulfate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	SO4	% Sea	Salt	Total
	First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col Eff		BDL	Mean mg/l	Dep g/m2	Correction		Precip cm
Pennsylvania																	
NADP																	
Leading Ridge	Dec 4 79	Mar 4 80	2	1	2	92	100	85	92	90	11		2.91	.35			11.9
MAP3a/PCN																	
Penn State	Dec 1 79	Mar 1 80	2	2B	1	100	100	99	95	94	18		1.74	.21			11.9
UAPSP																	
Scranton	Dec 1 79	Mar 1 80	2	2A	1	100	100	100	100	97	11		2.00	.13			6.6
South Carolina																	
NADP																	
Clemson	Dec 4 79	Mar 4 80	3	3	1	100	89	82	85	94	11		2.03	.45			22.2
Tennessee																	
UAPSP																	
Giles County	Dec 1 79	Mar 1 80	2	2A	1	100	99	97	88	99	22		2.01	.49			24.4
Virginia																	
MAP3a/PCN																	
Virginia	Dec 1 79	Mar 1 80	2	2A	2	100	96	93	70	87	14		1.36	.24			17.3
West Virginia																	
NADP																	
Parsons	Dec 4 79	Mar 4 80	2	2A	1	100	100	92	92	88	12		2.42	.42			17.2
UAPSP																	
Lewisburg	Dec 1 79	Mar 1 80	2	2A	2	100	88	95	78	95	14		1.02	.17			16.5
New Brunswick																	
CANSAP																	
Acadia Fes	Dec 1 79	Feb 29 80	3	3	1	100	100	100	100	80	3		1.04	.20			19.6
Charlo	Dec 1 79	Feb 29 80	3	3	3	100	100	100	100	33	3		3.20	.58			18.0
													3.04	.55			
St. John	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	61	3		2.96	.56			18.9
													2.30	.43		23	
Newfoundland																	
CANSAP																	
Gander	Nov 30 79	Mar 1 80	3	3	3	100	100	100	100	32	3		1.84	.56			30.4
													1.44	.44		22	
Goose	Nov 30 79	Feb 29 80	3	2B	3	100	100	100	100	40	3		.84	.22			25.7
													.76	.19		10	
Nova Scotia																	
CANSAP																	
Truro	Dec 1 79	Feb 29 80	3	3	1	100	100	100	100	78	3		1.68	.44			26.1
													1.30	.34		24	
APN																	
Kejimikujik (b)	Dec 1 79	Mar 1 80	2	2A	1	100	96	97	87	107	20		1.63	.29			17.9
													1.31	.24		14	

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 3

Sulfate

State	Network	Site Name	Period Summarized		Overall	Site Data	%	%	%	%	%	N	N	Wtd	SO4	%	Total
			First Date	Last Date	Rating	Rep Comp	PCL	TP	VSL	VSMP	Col Eff		BDL	Mean	Dep	Sea Salt	Precip
														mg/l	g/m2	Correction	cm
<b>Ontario</b>																	
	<b>CANSAP</b>																
		Atikokan	Nov 30 79	Feb 29 80	3	3	3	100	77	68	67	59	2	1.54	.10		6.8
		Kingston	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	72	3	4.23	.63		14.8
		Moosonee	Dec 1 79	Feb 29 80	3	2B	3	100	69	67	67	35	2	1.62	.15		9.0
														1.53	.14	5	
		Mount Forest (a)	Dec 1 79	Mar 3 80	3	3	1	100	100	100	100	59	3	4.32	.65		15.1
		Peterborough	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	68	3	5.50	.87		15.8
		Simcoe	Dec 1 79	Feb 29 80	3	3	1	100	100	100	100	68	3	4.34	.81		18.6
	<b>APN</b>																
		Chalk River	Dec 1 79	Mar 1 80	2	2A	1	100	100	100	100	83	28	2.51	.22		8.8
		ELA (b)	Dec 1 79	Mar 1 80	3	2A	3	100	64	97	82	73	14	1.11	.06		5.2
		Long Point	Dec 1 79	Mar 1 80	3	3	2	99	96	91	71	104	17	2.13	.26		12.2
<b>Quebec</b>																	
	<b>CANSAP</b>																
		Chibougamau	Nov 30 79	Feb 29 80	3	3	3	100	100	100	100	31	3	1.74	.25		14.2
		Maniwaki	Nov 30 79	Feb 29 80	3	2B	3	100	88	69	67	42	2	5.37	.51		9.6
		Nitchequon	Dec 1 79	Feb 29 80	3	2B	3	100	100	100	100	34	3	.68	.08		11.3
		Quebec City	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	52	3	5.49	.65		11.9
		Sept Isles	Nov 30 79	Feb 29 80	3	3	3	100	100	100	100	31	3	1.94	.28		14.5
														1.67	.24	11	
		St. Hubert	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	88	3	4.41	.47		10.6

Table 2(b)

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles				D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Lewes	2	2A	2	14		1.58	1.68	.59	1.97	1.12	.81	.90	1.7	3.1	3.8	.174	.187
UAPSP																	
Indian River	3	3	2	15		1.93	1.82	.87	2.59	2.45	.35	.95	1.6	3.5	9.8	.238*	.126
Georgia																	
NADP																	
Georgia Station	2	2A	1	13		<u>1.96</u>	2.12	.68	2.67	2.14	.70	1.52	2.1	2.7	8.3	.313*	.179
Illinois																	
NADP																	
Bondville	2	2A	2	11		3.33	3.27	.67	3.97	2.57	1.07	1.85	3.2	5.6	9.4	.156	.156
Dixon Springs	2	2B	2	10		3.57	3.17	.50	3.52	1.57	1.40	1.95	3.6	5.1	5.6	.142	.188
Indiana																	
UAPSP																	
Fort Wayne	2	2A	2	13		2.18	2.07	.74	2.54	1.52	.33	1.46	2.3	3.6	6.0	.126	.157
Rockport	3	3	1	17		2.43	2.20	.72	2.73	1.78	.42	1.36	2.8	3.3	6.8	.182	.161
Massachusetts																	
UAPSP																	
Montague	2	2A	1	7		1.44	1.65	.55	1.87	.98	.87	.88	1.5	2.9	3.3	.233	.164
Minnesota																	
NADP*																	
Marcell	2	2B	2	9	1	1.16	1.30	1.06	2.24	2.94	.45	.71	1.1	2.7	9.6	.356*	.199
New York																	
NADP																	
Huntington	2	2B	2	11	1	<u>1.76</u>	1.50	1.07	2.20	1.63	.30	.69	1.8	3.9	5.1	.149	.158
MAP3s/PCN																	
Brookhaven	2	2B	1	10		2.36	1.84	.66	2.24	1.54	.60	1.18	1.7	3.4	5.4	.330*	.236
Ithaca	2	2A	2	15		1.37	1.22	.74	1.51	.91	.34	.60	1.6	2.5	2.9	.137	.188
Whiteface	2	1	2	10		<u>1.76</u>	1.80	.52	2.02	.99	.88	1.02	1.9	3.0	3.6	.189	.152
North Carolina																	
NADP																	
Clinton Station	2	2A	2	13		1.92	1.89	.55	2.15	1.14	.60	1.50	1.8	2.6	5.0	.158	.150
Coweeta	2	2A	1	13		1.70	1.78	.52	2.01	1.00	.75	1.17	1.8	2.8	3.9	.178	.163
Lewiston	2	2A	1	11		1.78	1.54	.63	1.85	1.23	.60	1.00	1.6	2.4	4.9	.220	.139
Piedmont Station	2	2A	1	11		2.10	2.80	.59	3.26	1.86	1.00	2.05	2.8	4.6	7.1	.223	.124
UAPSP																	
Raleigh	3	3	2	14		1.68	1.56	.64	1.86	1.08	.46	.98	1.7	2.6	4.2	.126	.118
Ohio																	
NADP																	
Delaware	2	2A	2	11		2.64	2.33	.92	3.00	1.65	.22	1.65	3.8	4.0	5.6	.224	.245
Wooster	3	3	2	11		3.19	2.96	.77	3.82	2.74	1.05	1.23	2.7	5.7	9.6	.204	.206
UAPSP																	
Zanesville	3	3	1	12		2.28	1.95	.55	2.22	1.23	.54	1.63	2.0	2.6	5.6	.241	.190
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	11		2.91	2.47	.69	3.02	1.98	.84	1.60	2.6	4.1	7.4	.171	.115
MAP3s/PCN																	
Penn State	2	2B	1	18		<u>1.74</u>	1.89	.77	2.43	1.70	.37	1.30	2.0	3.4	6.2	.208*	.107
UAPSP																	
Scranton	2	2A	1	11		2.00	1.95	.64	2.36	1.71	.68	1.44	2.0	3.4	6.7	.274*	.162

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 2

Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles 50% mg/l	75%	Max	D-Statistic Gau	Log
South Carolina																	
NADP Clemson	3	3	1	11		2.03	2.25	.49	2.51	1.19	1.10	1.40	2.6	3.1	5.0	.176	.178
Tennessee																	
UAPSP Giles County	2	2A	1	22		2.01	2.36	.48	2.64	1.36	1.11	1.60	2.3	3.1	6.0	.171	.106
Virginia																	
MAP3a/PCN Virginia	2	2A	2	14		1.36	1.31	.75	1.75	1.65	.43	.81	1.2	2.3	6.8	.263*	.169
West Virginia																	
NADP Parsons	2	2A	1	12		2.42	2.19	.64	2.53	1.14	.50	1.44	2.8	3.2	4.2	.160	.238
UAPSP Lewisburg	2	2A	2	14		1.02	1.09	.83	1.45	1.13	.16	.78	1.1	2.0	3.9	.278*	.150
New Brunswick																	
CANSAP Acadia Fes	3	3	1	3		1.04	.98	.59	1.11	.69	.62	.62	0.8	1.9	1.9	.336	.300
Charlo	3	3	3	3		3.20	3.06	.18	3.09	.56	2.60	2.60	3.0	3.7	3.7	.247	.226
St. John	3	3	1	3		2.96	3.03	.07	3.03	.21	2.80	2.80	3.1	3.2	3.2	.292	.297
Newfoundland																	
CANSAP Gander	3	3	3	3		1.84	1.76	.32	1.82	.59	1.30	1.30	1.7	2.5	2.5	.250	.211
Goose	3	2B	3	3		.84	.83	.45	.88	.35	.50	.50	0.9	1.2	1.2	.225	.272
Nova Scotia																	
CANSAP Truro	3	3	1	3		1.68	2.00	.46	2.13	.86	1.20	1.20	2.3	2.9	2.9	.243	.286
APN Kejimikujik (b)	2	2A	1	20		1.63	1.81	.74	2.34	1.83	.40	1.23	1.7	2.9	7.4	.195*	.137
Ontario																	
CANSAP Atikokan	3	3	3	2		1.54	1.57	.27	1.60	.43	1.30		1.6		1.9	.260	.260
Kingston	3	3	1	3		4.23	4.72	.38	4.98	2.05	3.60	3.60	4.0	7.3	7.3	.350	.335
Moosonee	3	2B	3	2		1.62	2.15	.51	2.30	1.13	1.50		2.3		3.1	.260	.260
Mount Forest (a)	3	3	1	3		4.32	4.30	.15	4.33	.67	3.90	3.90	4.0	5.1	5.1	.359	.355
Peterborough	3	3	1	3		5.50	6.12	.65	7.09	4.88	3.70	3.70	4.9	12.7	12.7	.340	.302
Simcoe	3	3	1	3		4.34	4.84	.43	5.16	2.37	3.60	3.60	4.0	7.9	7.9	.355	.340
APN Chalk River	2	2A	1	28		2.51	2.12	.58	2.52	1.68	.83	1.31	2.0	3.3	8.5	.171*	.085
ELA (b)	3	2A	3	14		1.11	1.30	.82	1.76	1.47	.36	.76	1.2	2.9	5.3	.240*	.118
Long Point	3	3	2	17		2.13	2.41	.78	3.04	1.92	.30	1.70	2.2	5.4	6.2	.257*	.150
Quebec																	
CANSAP Chibougamau	3	3	3	3		1.74	1.65	.34	1.71	.61	1.24	1.24	1.5	2.4	2.4	.304	.275
Maniwaki	3	2B	3	2		5.37	5.42	.14	5.44	.78	4.90		5.4		6.0	.260	.260
Nitchequon	3	2B	3	3		.68	.61	.37	.63	.21	.40	.40	0.7	0.8	0.8	.298	.321
Quebec City	3	3	1	3		5.49	5.46	.51	5.93	2.80	3.20	3.20	5.8	8.8	8.8	.186	.213
Sept Isles	3	3	3	3		1.94	2.32	.86	2.86	1.95	.90	.90	2.9	4.8	4.8	.177	.269
St. Hubert	3	3	1	3		4.41	4.79	.66	5.59	3.99	3.00	3.00	3.6	10.2	10.2	.358	.335

1  
35  
1

Table 3(a)

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Period Summarized		Overall Rating	Site Data		% PCL	% TP	% VSL	% VSMF	% Col Eff	N	N BDL	Wtd Mean mg/l	SO4 Dep g/m2	% Sea Correction	Total Salt Precip cm
First Date	Last Date			Rep	Comp											
Delaware																
MAP3s/PCN																
Lewes	Mar 1 80	Jun 1 80	2	2A	2	100	100	98	88	77	15		2.52 2.12	.86 .72	15	34.0
UAPSP																
Indian River	Mar 1 80	Jun 1 80	3	3	1	100	99	98	92	98	23		2.46 2.23	.84 .76	6	34.0
Georgia																
NADP																
Georgia Station	Mar 4 80	Jun 3 80	2	2A	1	100	100	100	100	107	12		1.48	.74		50.0
Illinois																
NADP																
Dixon Springs	Mar 4 80	Jun 3 80	2	2B	1	100	100	86	85	91	11		3.14	.96		30.6
MAP3s/PCN																
Illinois	Mar 1 80	Jun 1 80	3	2A	3	100	90	86	63	74	22		3.21	.90		28.0
Indiana																
UAPSP																
Fort Wayne	Mar 1 80	Jun 1 80	2	2A	2	100	96	92	79	88	27		2.79	.73		26.0
Rockport	Mar 1 80	Jun 1 80	3	3	1	100	100	100	100	99	30		2.67	.77		28.9
Massachusetts																
UAPSP																
Montague	Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	96	18		1.91	.60		31.4
Michigan																
NADP																
Wellston	Mar 4 80	Jun 3 80	2	2A	2	92	86	77	82	97	9		3.49	.55		15.9
Minnesota																
NADP																
Lamberton	Mar 4 80	Jun 3 80	2	1	2	92	100	85	91	96	10		3.09	.53		17.2
New Hampshire																
NADP																
Hubbard Brook	Mar 4 80	Jun 3 80	1	1	1	100	100	92	92	98	12		2.14	.67		31.1
New York																
NADP																
Aurora	Mar 4 80	Jun 3 80	2	2A	2	92	100	92	100	94	12		3.07	.72		23.5
Huntington	Mar 4 80	Jun 3 80	2	2B	2	92	100	92	100	149	12		2.22	.59		26.8
Jasper	Mar 4 80	Jun 3 80	2	2A	1	100	99	85	85	91	11		2.60	.61		23.3
Knobit	Feb 26 80	Jun 3 80	2	2A	1	100	92	86	92	89	12		2.65	.61		23.1
Stillwell Lake	Mar 4 80	Jun 3 80	2	2B	1	100	100	100	100	87	13		2.15	1.08		50.0
MAP3s/PCN																
Brookhaven	Mar 1 80	Jun 1 80	2	2B	1	100	99	97	88	93	21		2.38 2.13	.81 .72	5	33.9
Ithaca	Mar 1 80	Jun 1 80	2	2A	1	99	100	98	94	95	17		1.65	.48		29.0
Whiteface	Mar 1 80	Jun 1 80	1	1	1	99	100	99	100	124	15		2.50	.51		20.5
North Carolina																
NADP																
Clinton Station	Mar 4 80	Jun 3 80	3	2A	3	100	100	69	69	95	9		1.30	.38		29.7
Piedmont Station	Mar 4 80	Jun 3 80	2	2A	2	92	100	85	92	97	11		3.02	1.04		34.6
UAPSP																
Raleigh	Mar 1 80	Jun 1 80	3	3	2	100	99	98	90	76	18		1.40	.41		29.1

28-Jun-1985  
Page 2

State	Network	Period Summarized						Overall	Site Data				% Col Eff	N	N BDL	Wtd Mean mg/l	SO <sub>4</sub> Dep g/m <sup>2</sup>	% Sea Correction	Salt Precip cm
	Site Name	First Date	Last Date			Rating	Rep	Comp	PCL	TP	VSL	VSNP							
Ohio	NADP																		
	Caldwell	Mar 4 80	Jun 3 80	2	2B	1	100	91	85	85	107	11			3.44	1.11		32.4	
	Wooster	Mar 4 80	Jun 3 80	3	3	2	92	91	77	83	99	10			3.33	.86		25.8	
	MAP3s/PCN																		
	Oxford	Mar 1 80	Jun 1 80	2	2B	1	100	94	95	81	104	21	1		3.27	1.06		32.4	
	UAPSP																		
	Zanesville	Mar 1 80	Jun 1 80	3	3	2	100	100	99	97	78	29			2.94	1.22		41.5	
Pennsylvania	NADP																		
	Kane	Mar 4 80	Jun 3 80	2	2A	1	100	100	100	100	97	13			3.06	1.17		38.2	
	Leading Ridge	Mar 4 80	Jun 3 80	2	1	2	92	100	92	100	92	12			2.85	1.07		37.4	
	MAP3s/PCN																		
	Penn State	Mar 1 80	Jun 1 80	2	2B	1	100	100	100	100	137	19			2.53	.88		34.7	
	UAPSP																		
	Scranton	Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	98	24			1.98	.51		25.8	
South Carolina	NADP																		
	Clemson	Mar 4 80	Jun 3 80	3	3	2	92	100	85	91	101	10			1.69	.94		56.0	
Tennessee	UAPSP																		
	Giles County	Mar 1 80	Jun 1 80	2	2A	1	100	99	97	88	84	22			1.42	.93		65.7	
Virginia	MAP3s/PCN																		
	Virginia	Mar 1 80	Jun 1 80	2	2A	1	98	96	95	86	96	18			2.58	.78		30.3	
West Virginia	NADP																		
	Parsons	Mar 4 80	Jun 3 80	2	2A	2	92	100	92	100	92	12			3.42	1.30		38.0	
	UAPSP																		
	Lewisburg	Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	102	20			1.69	.35		20.8	
New Brunswick	CANSAP																		
	Acadia Fes Charlo	Feb 29 80	May 31 80	3	3	1	100	100	100	100	91	3			1.96	.52		26.5	
		Feb 29 80	May 31 80	3	3	2	100	100	100	100	67	3			1.47	.57		38.9	
															1.37	.53	6		
	St. John	Feb 29 80	May 31 80	3	3	2	100	100	100	100	77	3			1.90	.63		33.0	
															1.75	.58	6		
Newfoundland	CANSAP																		
	Goose	Feb 29 80	May 31 80	2	2B	2	100	100	100	100	75	3			1.19	.22		18.8	
															1.13	.21	4		
	Stephenville	Feb 29 80	May 31 80	3	3	3	100	66	66	67	90	2			1.30	.25		19.4	

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 3

Sulfate

State	Network	Site Name	Period Summarized		Overall	Site Data	%	%	%	%	%	N	N	Wtd	SO4	% Sea	Salt	Total
			First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	Eff	Mean	Dep	Correction	Precip	cm
Nova Scotia																		
CANSAP																		
		Kejimikujik (a)	Feb 29 80	Jun 2 80	2	2A	1	100	100	100	100	126	3	1.46	.39			26.9
														1.27	.34	8		
		Truro	Feb 29 80	May 31 80	3	3	1	100	100	100	100	89	3	1.89	.57			30.3
														1.78	.54	4		
APN																		
		Kejimikujik (b)	Mar 1 80	Jun 1 80	2	2A	1	99	83	97	90	101	18	1 1.66	.54			32.3
														1 1.45	.47	7		
Ontario																		
CANSAP																		
		Dorset (a)	Feb 29 80	May 31 80	2	1	2	100	100	100	100	72	3	2.85	.76			26.6
		ELA (a)	Feb 29 80	May 31 80	2	2A	2	100	100	100	100	74	3	1.85	.10			5.1
		Harrow	Feb 29 80	Jun 1 80	3	3	2	100	100	100	100	68	3	4.40	1.19			27.1
		Kingston	Feb 29 80	May 31 80	3	3	2	100	100	100	100	78	3	3.03	.99			32.5
		Mount Forest (a)	Mar 3 80	Jun 1 80	3	3	3	100	74	66	67	66	2	2.18	.55			25.1
		Peterborough	Feb 29 80	May 31 80	3	3	2	100	97	96	75	68	3	2.85	.68			23.8
		Pickle Lake	Feb 29 80	Jun 1 80	3	2A	3	100	78	67	67	58	2	3.94	.29			7.3
		Simcoe	Feb 29 80	May 31 80	3	3	1	100	100	100	100	91	3	3.31	.87			26.3
APN																		
		Chalk River	Mar 1 80	Jun 1 80	2	2A	1	100	99	99	97	96	38	2.72	.60			22.1
		ELA (b)	Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	85	13	1.79	.10			5.6
		Long Point	Mar 1 80	Jun 1 80	3	3	1	100	96	98	94	93	33	4.42	1.18			26.6
Quebec																		
CANSAP																		
		Chibougamau	Feb 29 80	May 30 80	3	3	3	100	100	100	100	60	3	1.30	.19			14.6
		Maniwaki	Feb 29 80	May 31 80	2	2B	1	100	100	100	100	86	3	2.72	.58			21.4
		Nitchequon	Feb 29 80	May 31 80	3	2B	3	100	100	100	100	52	3	.91	.14			14.9
		Quebec City	Feb 29 80	May 31 80	3	3	1	100	100	100	100	88	3	3.56	.99			27.8
		Sept Isles	Feb 29 80	May 31 80	3	3	2	100	100	100	100	62	3	1.49	.49			33.1
														1.16	.38	23		
		St. Hubert	Feb 29 80	May 31 80	3	3	3	100	69	66	67	77	2	3.12	.71			22.8



Table 3(b)

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	Concentration										K-S		
					N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles mg/l 50%	75%	Max	D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Lewes	2	2A	2	15		2.52	2.28	.65	2.74	1.69	.87	1.54	2.0	3.9	6.4	.200	.112
UAPSP																	
Indian River	3	3	1	23		2.46	2.42	.78	3.04	1.88	.28	1.61	2.8	4.3	8.2	.156	.144
Georgia																	
NADP																	
Georgia Station	2	2A	1	12		1.48	2.03	.99	4.07	7.72	.78	1.07	1.5	3.3	28.3	.384*	.261*
Illinois																	
NADP																	
Dixon Springs	2	2B	1	11		3.14	3.39	.46	3.74	1.82	1.62	2.28	3.1	4.8	7.9	.183	.139
MAP3s/PCN																	
Illinois	3	2A	3	22		3.21	3.13	.61	3.69	2.03	.96	2.02	3.2	5.3	7.5	.155	.101
Indiana																	
UAPSP																	
Fort Wayne	2	2A	2	27		2.79	3.08	.56	3.61	2.27	.99	2.17	3.0	4.2	11.2	.167	.069
Rockport	3	3	1	30		2.67	2.78	.49	3.14	1.72	1.10	1.92	2.8	3.9	8.7	.164*	.069
Massachusetts																	
UAPSP																	
Montague	2	2A	1	18		1.91	2.32	.99	3.53	3.40	.47	.94	2.7	4.9	13.5	.183	.104
Michigan																	
NADP																	
Wellston	2	2A	2	9		3.49	3.71	.55	4.27	2.55	1.75	2.57	2.9	6.2	9.2	.253	.218
Minnesota																	
NADP																	
Lamberton	2	1	2	10		3.09	2.64	.53	2.98	1.54	1.08	1.98	2.5	4.0	6.2	.210	.165
New Hampshire																	
NADP																	
Hubbard Brook	1	1	1	12		2.14	2.40	.75	3.13	2.52	.76	1.32	2.0	4.8	9.4	.235	.147
New York																	
NADP																	
Aurora	2	2A	2	12		3.07	3.43	.68	4.19	2.68	1.03	2.01	3.4	6.9	8.7	.186	.127
Huntington	2	2B	2	12		2.22	2.32	.54	2.61	1.16	.73	1.73	2.4	3.8	4.1	.168	.145
Jasper	2	2A	1	11		2.60	2.91	.62	3.47	2.16	1.42	1.53	2.7	4.6	8.0	.209	.195
Knobit	2	2A	1	12		2.65	3.34	.95	4.80	3.99	.65	1.73	3.6	6.6	13.0	.176	.136
Stillwell Lake	2	2B	1	13		2.15	3.46	.85	5.24	6.71	1.26	1.75	2.9	6.1	26.5	.299*	.148
MAP3s/PCN																	
Brookhaven	2	2B	1	21		2.38	3.14	.80	4.37	4.16	.83	1.82	3.1	5.0	16.3	.256*	.137
Ithaca	2	2A	1	17		1.65	1.92	1.04	3.02	2.97	.16	1.13	1.8	4.2	9.2	.313*	.156
Whiteface	1	1	1	15		2.50	2.27	.60	2.66	1.59	.56	1.63	2.5	3.0	6.8	.221*	.126
North Carolina																	
NADP																	
Clinton Station	3	2A	3	9		1.30	1.74	.55	2.00	1.21	.88	1.05	1.5	2.6	4.7	.217	.163
Piedmont Station	2	2A	2	11		3.02	4.29	.85	6.33	7.17	1.32	2.66	3.6	8.4	25.9	.345*	.240
UAPSP																	
Raleigh	3	3	2	18		1.40	2.05	.80	2.89	2.91	.64	1.01	1.9	3.2	10.5	.245*	.094

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 2

Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles mg/l 50%	75%	Max	D-Statistic Gau	Log
Ohio																	
NADP																	
Caldwell	2	2B	1	11		3.44	4.00	.50	4.51	2.50	2.02	2.53	3.6	6.3	10.4	.199	.130
Wooster	3	3	2	10		3.33	3.77	.45	4.16	2.17	2.27	2.62	3.5	5.0	9.2	.237	.145
MAP3a/PCN																	
Oxford	2	2B	1	21	1	3.27	3.30	.51	3.74	2.04	1.06	2.40	3.4	4.8	8.8	.159	.125
UAPSP																	
Zanesville	3	3	2	29		2.94	3.34	.54	3.96	3.06	1.69	2.26	2.7	5.0	16.8	.288*	.221*
Pennsylvania																	
NADP																	
Kane	2	2A	1	13		3.06	4.20	.88	6.76	9.47	1.76	1.99	3.7	5.6	36.3	.389*	.208
Leading Ridge	2	1	2	12		2.85	3.05	.63	3.63	2.13	1.15	1.64	3.3	5.6	7.7	.145	.145
MAP3a/PCN																	
Penn State	2	2B	1	19		2.53	2.36	.66	2.77	1.32	.35	1.63	2.7	3.9	5.2	.145	.165
UAPSP																	
Scranton	2	2A	1	24		1.98	2.52	.75	3.32	2.72	.69	1.44	2.5	4.0	11.0	.203*	.063
South Carolina																	
NADP																	
Clemson	3	3	2	10		1.69	2.03	.62	2.48	1.97	1.05	1.17	1.9	3.2	7.6	.270*	.167
Tennessee																	
UAPSP																	
Giles County	2	2A	1	22		1.42	1.60	.66	2.01	1.64	.52	1.03	1.6	1.8	7.3	.353*	.225*
Virginia																	
MAP3a/PCN																	
Virginia	2	2A	1	18		2.58	2.87	.79	3.76	2.76	.66	1.63	3.1	5.7	10.6	.183	.084
West Virginia																	
NADP																	
Parsons	2	2A	2	12		3.42	3.63	.52	4.13	2.37	1.74	2.59	3.4	4.9	9.0	.226	.126
UAPSP																	
Lewisburg	2	2A	1	20		1.69	1.86	.85	2.66	2.52	.58	.85	1.6	3.6	9.8	.245*	.113
New Brunswick																	
CANSAP																	
Acadia Fes	3	3	1	3		1.96	2.18	.77	2.70	2.25	1.30	1.30	1.5	5.3	5.3	.369	.352
Charlo	3	3	2	3		1.47	1.35	1.15	1.96	1.78	.40	.40	1.6	3.9	3.9	.248	.224
St. John	3	3	2	3		1.90	2.01	.45	2.16	1.07	1.50	1.50	1.6	3.4	3.4	.369	.360
Newfoundland																	
CANSAP																	
Goose	2	2B	2	3		1.19	1.29	.54	1.43	.84	.90	.90	1.0	2.4	2.4	.364	.350
Stephenville	3	3	3	2		1.30	.92	1.17	1.25	1.20	.40		1.2		2.1	.260	.260
Nova Scotia																	
CANSAP																	
Kejimkujik (a)	2	2A	1	3		1.46	1.63	.79	2.03	1.71	.90	.90	1.2	4.0	4.0	.354	.317
Truro	3	3	1	3		1.89	1.79	.76	2.13	1.40	.80	.80	2.0	3.6	3.6	.204	.224
APN																	
Kejimkujik (b)	2	2A	1	18	1	1.66	1.78	1.17	3.10	3.39	.20	.92	1.6	4.3	11.7	.261*	.122

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 3

Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	Concentration											K-S		
				N	N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles mg/l 50%	75%	Max	D-Statistic Gau	Log
Ontario																	
CANSAP																	
Dorset (a)	2	1	2	3		2.85	2.99	.50	3.26	1.76	2.20	2.20	2.3	5.3	5.3	.375	.369
ELA (a)	2	2A	2	3		1.85	1.54	.63	1.77	1.17	.90	.90	1.3	3.1	3.1	.321	.271
Harrow	3	3	2	3		4.40	4.44	.12	4.46	.55	3.90	3.90	4.5	5.0	5.0	.191	.207
Kingston	3	3	2	3		3.03	3.56	.64	4.10	2.66	2.00	2.00	3.2	7.1	7.1	.299	.234
Mount Forest (a)	3	3	3	2		2.18	2.14	.33	2.20	.71	1.70		2.2		2.7	.260	.260
Peterborough	3	3	2	3		2.85	3.50	.67	4.10	2.89	2.00	2.00	2.9	7.4	7.4	.327	.277
Pickle Lake	3	2A	3	2		3.94	3.34	.36	3.45	1.20	2.60		3.4		4.3	.260	.260
Simcoe	3	3	1	3		3.31	3.39	.25	3.46	.86	2.70	2.70	3.3	4.4	4.4	.243	.214
APN																	
Chalk River	2	2A	1	38		2.72	3.06	.85	4.29	3.74	.30	1.82	2.8	5.7	14.7	.220*	.078
ELA (b)	2	2A	1	13		1.79	1.17	.87	1.62	1.27	.33	.56	0.9	3.0	3.6	.303*	.216
Long Point	3	3	1	33		4.42	4.05	.57	4.74	2.83	1.30	2.70	3.9	6.3	15.2	.168*	.134
Quebec																	
CANSAP																	
Chibougamau	3	3	3	3		1.30	1.18	.68	1.40	1.04	.80	.80	0.8	2.6	2.6	.385	.385
Maniwaki	2	2B	1	3		2.72	2.64	.67	3.06	2.01	1.40	1.40	2.5	5.3	5.3	.278	.201
Nitchequon	3	2B	3	3		.91	.78	.45	.83	.40	.60	.60	0.6	1.3	1.3	.385	.385
Quebec City	3	3	1	3		3.56	3.52	.31	3.63	1.03	2.50	2.50	3.9	4.5	4.5	.269	.295
Sept Isles	3	3	2	3		1.49	1.37	.35	1.43	.51	1.00	1.00	1.3	2.0	2.0	.269	.230
St. Hubert	3	3	3	2		3.12	3.28	.44	3.45	1.48	2.40		3.4		4.5	.260	.260

Table 4(a)

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)28-Jun-1985  
Page 1

## Sulfate

State	Network	Period Summarized				Overall	Site	Data	%	%	%	%	%	%	%	N	N	Wtd	SO4	%	Sea	Salt	Total
	Site Name	First	Date	Last	Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	Eff		BDL	Mean	Dep	g/m2	Correction		Precip	
																	mg/l					cm	
Delaware	MAP3s/PCN																						
	Lewes	Jun	1 80	Sep	1 80	2	2A	2	100	99	95	75	84	15			3.96	.82				20.7	
																	3.80	.79		3			
Illinois	NADP																						
	Argonne	Jun	3 80	Sep	2 80	3	3	1	100	100	100	100	97	13			4.35	1.65				38.0	
	Bondville	Jun	3 80	Sep	2 80	2	2A	2	92	100	85	92	97	11			4.33	1.18				27.3	
	Dixon Springs	Jun	3 80	Sep	2 80	3	2B	3	92	100	69	75	90	9			3.31	.79				23.9	
	Salem	Jun	3 80	Sep	2 80	1	1	1	100	99	85	85	94	11			3.36	.82				24.4	
	MAP3s/PCN																						
	Illinois	Jun	1 80	Sep	1 80	3	2A	3	100	98	89	69	58	22			3.64	1.59				43.6	
Indiana	UAPSP																						
	Fort Wayne	Jun	1 80	Sep	1 80	2	2A	1	100	99	95	83	99	25			3.34	1.15				34.4	
	Rockport	Jun	1 80	Sep	1 80	3	3	1	100	100	100	100	100	21			3.31	1.07				32.2	
Maine	NADP																						
	Caribou	Jun	3 80	Sep	3 80	3	2B	3	93	83	68	82	101	9			2.21	.54				24.3	
Michigan	NADP																						
	Douglas Lake	Jun	3 80	Sep	2 80	2	1	2	92	100	92	100	103	12			3.83	.50				13.1	
	Wellston	Jun	3 80	Sep	2 80	3	2A	3	92	73	69	75	99	9			3.28	.93				28.2	
Minnesota	NADP																						
	Lamberton	Jun	3 80	Sep	2 80	2	1	2	92	100	92	100	94	12			1.54	.38				24.9	
	Marcell	Jun	3 80	Sep	2 80	2	2B	2	92	100	92	100	91	12			1.13	.35				31.2	
Nebraska	NADP																						
	Head	Jun	3 80	Sep	2 80	2	2	2	92	97	85	92	105	11			1.68	.43				25.3	
New York	NADP																						
	Aurora	Jun	3 80	Sep	2 80	2	2A	2	92	100	85	92	97	11			5.18	1.48				28.5	
	Jasper	Jun	3 80	Sep	2 80	2	2A	2	92	100	85	92	102	11			3.68	.72				19.5	
	Stillwell Lake	Jun	3 80	Sep	2 80	2	2B	2	92	100	85	91	91	10			5.00	1.12				22.5	
	MAP3s/PCN																						
	Brookhaven	Jun	1 80	Sep	1 80	2	2B	1	100	99	98	87	98	13			3.89	.62				15.8	
																	3.84	.61		1			
	Ithaca	Jun	1 80	Sep	1 80	2	2A	1	100	99	99	95	105	18			4.56	1.00				21.9	
	Whiteface	Jun	1 80	Sep	1 80	1	1	1	100	97	96	89	114	31			3.24	1.03				31.8	
North Carolina	NADP																						
	Clinton Station	Jun	3 80	Sep	2 80	2	2A	1	100	100	100	100	92	12			2.59	.71				27.4	
	Coweeta	Jun	3 80	Sep	2 80	2	2A	1	100	100	92	92	94	12			2.29	.59				25.9	
	Lewiston	Jun	3 80	Sep	2 80	2	2A	2	92	100	85	92	97	11			3.86	.40				10.3	
																	3.78	.39		2			
	Piedmont Station	Jun	3 80	Sep	2 80	2	2A	2	92	100	77	83	95	10			4.86	.81				16.7	
	UAPSP																						
	Raleigh	Jun	1 80	Sep	1 80	3	3	2	100	99	96	79	95	15			2.39	.47				19.7	

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 2

Sulfate

State	Network	Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	%	Col	N	N	BDL	Wtd	SO4	%	Sea	Salt	Total
			First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP		Eff					Mean	Dep	Correction		Precip	
			Date	Date														mg/l	g/m2			cm	
Ohio																							
	NADP																						
		Caldwell	Jun 3 80	Sep 2 80	2	2B	1	100	100	100	100		101	13				5.19	2.24			43.1	
		Delaware	Jun 3 80	Sep 2 80	2	2A	1	100	100	100	100		85	13				4.74	2.37			50.1	
		Wooster	Jun 3 80	Sep 2 80	3	3	1	100	100	100	100		92	12				3.95	1.70			43.1	
	MAP3s/PCN																						
		Oxford	Jun 1 80	Sep 1 80	3	2B	3	100	87	89	67		73	20				4.62	1.90			41.2	
	UAPSP																						
		Zanesville	Jun 1 80	Sep 1 80	3	3	1	100	100	99	97		105	30				4.05	2.15			53.1	
Pennsylvania																							
	NADP																						
		Leading Ridge	Jun 3 80	Sep 2 80	2	1	2	92	100	92	100		96	12				4.94	1.17			23.6	
	MAP3s/PCN																						
		Penn State	Jun 1 80	Sep 1 80	2	2B	1	100	100	100	100		113	24				5.39	1.37			25.4	
	UAPSP																						
		Scranton	Jun 1 80	Sep 1 80	2	2A	1	100	100	100	100		106	26				4.43	.66			14.8	
Virginia																							
	MAP3s/PCN																						
		Virginia	Jun 1 80	Sep 1 80	3	2A	3	100	64	92	68		98	15				4.03	.92			23.0	
West Virginia																							
	NADP																						
		Parsons	Jun 3 80	Sep 2 80	2	2A	1	100	100	100	100		92	13				4.17	1.90			45.6	
	UAPSP																						
		Lewisburg	Jun 1 80	Sep 1 80	2	2A	1	100	100	99	96		103	26				3.09	.85			27.4	
Wisconsin																							
	NADP																						
		Spooner	Jun 1 80	Sep 2 80	2	1	2	98	75	83	85		86	11				2.08	.67			32.1	
		Trout Lake	Jun 3 80	Sep 2 80	1	1	1	100	100	100	100		94	13				1.38	.51			37.2	
New Brunswick																							
	CANSAP																						
		Acadia Pes	May 31 80	Aug 31 80	3	3	1	100	100	100	100		96	3				2.78	.95			34.3	
		Charlo	May 31 80	Aug 30 80	3	3	1	100	100	100	100		83	3				2.51	1.01			40.3	
																		2.43	.98	3			
		St. John	May 31 80	Aug 31 80	3	3	1	100	100	100	100		81	3				3.98	1.43			35.9	
																		3.90	1.40	2			
Newfoundland																							
	CANSAP																						
		Goose	May 31 80	Aug 31 80	2	2B	1	100	100	100	100		83	3				.98	.34			35.1	
																		.95	.33	3			
Nova Scotia																							
	CANSAP																						
		Kejimikujik (a)	Jun 2 80	Aug 31 80	2	2A	2	100	100	100	100		76	3				2.22	.41			18.3	
																		2.17	.40	2			
		Shelburne	May 31 80	Aug 31 80	2	2A	1	100	100	100	100		91	3				3.30	.68			20.5	
																		3.19	.65	3			
		Truro	May 31 80	Sep 1 80	3	3	2	100	100	100	100		79	3				4.53	.99			21.8	
																		4.42	.96	3			
APN																							
		Kejimikujik (b)	Jun 1 80	Sep 1 80	2	2A	1	99	97	96	85		98	17				2.13	.39			18.5	
																		2.08	.38	3			

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 3

Sulfate

State	Network	Site Name	Period Summarized		Overall	Site Data	%	%	%	%	%	N	N	Wtd	SO4	%	Sea Salt	Total
			First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	BDL	Mean	Dep	g/m2	Correction	Precip
												Eff		mg/l				cm
Ontario																		
CANSAP																		
		Atikokan	May 31 80	Aug 31 80	3	3	1	100	100	100	100	91	3	1.27	.37			28.7
		Dorset (a)	May 31 80	Sep 1 80	3	1	3	100	73	66	67	93	2	2.80	1.18			42.2
		Harrow	Jun 1 80	Sep 2 80	3	3	1	100	100	100	100	95	3	4.34	1.95			44.9
		Kingston	May 31 80	Aug 30 80	3	3	1	100	100	100	100	90	3	5.12	1.28			24.9
		Mount Forest (a)	Jun 1 80	Sep 1 80	3	3	1	100	100	100	100	84	3	6.77	1.69			25.0
		Simcoe	May 31 80	Aug 31 80	3	3	1	100	100	100	100	90	3	4.94	1.16			23.5
APN																		
		Chalk River	Jun 1 80	Sep 1 80	2	2A	1	100	99	98	95	95	40	3.22	1.09			34.0
		Long Point	Jun 1 80	Sep 1 80	3	3	1	100	99	96	86	96	24	4.10	1.24			30.2
APIOS-C																		
		Bear Island	May 29 80	Sep 2 80	2	2A	1	100	100	100	100	87	3	3.49	.87			25.0
		Dorset (c)	May 31 80	Sep 2 80	1	1	1	100	100	100	100	87	3	3.97	1.60			40.4
		Killarney	May 28 80	Sep 2 80	3	2A	3	100	67	62	67	90	2	4.65	1.07			23.1
		Ramsey	May 29 80	Sep 2 80	2	2A	2	96	100	96	100	79	3	2.09	.41			19.6
Quebec																		
CANSAP																		
		Chibougamau	May 30 80	Aug 31 80	3	3	1	100	100	100	100	85	3	1.49	.54			36.5
		Fort Chimo	May 31 80	Aug 31 80	2	2B	2	100	100	100	100	63	3	.84	.09			10.9
														.78	.08			
		Maniwaki	May 31 80	Sep 1 80	2	2B	1	100	100	100	100	90	3	3.36	1.18			35.0
		Nitchequon	May 31 80	Aug 31 80	2	2B	1	100	100	100	100	92	3	1.30	.46			35.9
		Quebec City	May 31 80	Aug 31 80	3	3	1	100	100	100	100	86	3	4.19	1.33			31.8
		St. Hubert	May 31 80	Aug 31 80	3	3	1	100	100	100	100	84	3	3.71	1.13			30.5

Table 4(b)

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	50% mg/l	75%	Max	D-Statistic Gau	Log
Delaware																	
MAP3a/PCN																	
Lewes	2	2A	2	15		3.96	4.53	.58	5.25	2.96	1.44	3.17	4.6	6.0	11.5	.212	.140
Illinois																	
NADP																	
Argonne	3	3	1	13		4.35	4.85	.41	5.31	2.92	2.88	3.71	4.4	5.9	14.3	.254*	.166
Bondville	2	2A	2	11		4.33	5.39	.55	6.22	3.73	2.62	3.33	5.3	7.9	14.6	.235	.149
Dixon Springs	3	2B	3	9		3.31	3.43	.48	3.80	1.85	1.61	2.42	3.3	5.0	7.5	.166	.130
Salem	1	1	1	11		3.36	4.05	.52	4.65	2.95	1.70	2.90	3.7	6.1	12.5	.270*	.177
MAP3a/PCN																	
Illinois	3	2A	3	22		3.64	3.73	.59	4.40	2.77	1.44	2.52	3.6	5.5	11.5	.174	.145
Indiana																	
UAPSP																	
Fort Wayne	2	2A	1	25		3.34	3.39	.57	3.95	2.48	.77	2.33	3.1	4.7	12.9	.183*	.099
Rockport	3	3	1	21		3.31	4.58	.69	6.01	6.27	1.47	2.89	4.5	7.1	31.5	.281*	.125
Maine																	
NADP																	
Caribou	3	2B	3	9		2.21	2.36	.79	3.24	3.21	.86	1.32	2.1	4.1	11.0	.301*	.150
Michigan																	
NADP																	
Douglas Lake	2	1	2	12		3.83	4.87	.83	6.87	6.78	1.58	2.49	4.1	7.5	24.3	.296*	.169
Wellston	3	2A	3	9		3.28	3.71	.54	4.34	3.12	2.02	2.62	3.2	5.1	11.9	.354*	.272*
Minnesota																	
NADP																	
Lamberton	2	1	2	12		1.54	1.93	.70	2.40	1.80	.59	1.50	1.8	3.1	7.1	.243*	.186
Marcell	2	2B	2	12		1.13	1.59	.53	1.78	.82	.68	.96	1.8	2.5	3.1	.141	.163
Nebraska																	
NADP																	
Head	2	2	2	11		1.68	1.86	.75	2.39	1.74	.79	.87	1.7	4.0	5.7	.196	.207
New York																	
NADP																	
Aurora	2	2A	2	11		5.18	5.42	.49	5.99	2.80	1.82	4.73	5.2	7.4	12.6	.227	.208
Jaasper	2	2A	2	11		3.68	4.12	.40	4.47	2.17	2.54	2.92	3.9	4.6	10.2	.300*	.216
Stillwell Lake	2	2B	2	10		5.00	6.25	.64	7.54	5.11	2.37	4.22	5.0	11.5	16.9	.280*	.220
MAP3a/PCN																	
Brookhaven	2	2B	1	13		3.89	3.68	.67	4.37	2.39	.79	2.21	4.1	6.0	9.1	.115	.155
Ithaca	2	2A	1	18		4.56	4.26	.58	5.23	4.78	2.11	3.00	3.7	6.0	23.0	.282*	.183
Whiteface	1	1	1	31		<u>3.24</u>	2.88	.78	3.81	2.91	.77	1.44	3.0	4.6	11.5	.173*	.086
North Carolina																	
NADP																	
Clinton Station	2	2A	1	12		2.59	3.23	1.12	4.67	3.30	.18	2.27	4.3	6.4	12.2	.170	.236
Coweeta	2	2A	1	12		2.29	2.61	.49	2.90	1.41	1.21	1.65	2.8	3.6	6.1	.131	.152
Lewiston	2	2A	2	11		3.86	4.85	.81	6.90	8.18	1.03	3.48	5.2	6.2	31.1	.427*	.266*
Piedmont Station	2	2A	2	10		4.86	5.56	.47	6.13	2.86	2.54	4.10	5.4	9.3	11.3	.294*	.218
UAPSP																	
Raleigh	3	3	2	15		2.39	3.18	.72	4.14	3.84	.74	1.94	3.4	5.0	16.9	.253*	.124

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 2

Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles				D-Statistic Gau	Log
Ohio																	
NADP																	
Caldwell	2	2B	1	13		5.19	5.71	.59	6.96	5.89	2.54	3.46	5.7	7.1	25.4	.329*	.193
Delaware	2	2A	1	13		4.74	4.60	.24	4.72	1.11	2.89	3.87	4.7	5.3	6.8	.203	.162
Wooster	3	3	1	12		3.95	4.70	.39	5.06	2.18	2.22	3.71	4.6	5.3	10.5	.281*	.205
MAP3s/PCN																	
Oxford	3	2B	3	20		4.62	4.69	.39	5.02	1.81	2.11	3.62	4.8	7.0	7.7	.147	.122
UAPSP																	
Zanesville	3	3	1	30		4.05	3.61	.52	4.06	1.82	.70	2.53	3.9	5.3	8.6	.105	.121
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	12		4.94	5.99	.51	6.77	3.87	2.32	4.30	6.2	8.0	17.5	.228	.149
MAP3s/PCN																	
Penn State	2	2B	1	24		5.39	5.35	.59	6.23	3.62	1.25	3.84	6.1	7.5	19.2	.159	.123
UAPSP																	
Scranton	2	2A	1	26		4.43	4.81	.47	5.36	2.67	2.42	3.21	4.7	7.2	13.2	.143	.117
Virginia																	
MAP3s/PCN																	
Virginia	3	2A	3	15		4.03	4.91	.63	5.98	4.15	2.21	2.78	3.8	9.6	15.4	.279*	.209
West Virginia																	
NADP																	
Parsons	2	2A	1	13		4.17	4.98	.55	5.83	4.04	2.26	3.39	4.3	6.9	17.4	.248*	.145
UAPSP																	
Lewisburg	2	2A	1	26		3.09	2.93	.57	3.40	1.91	1.00	1.85	2.9	4.8	8.9	.143	.089
Wisconsin																	
NADP																	
Spooner	2	1	2	11		2.08	2.09	.45	2.29	1.04	1.05	1.57	2.1	3.0	4.4	.178	.146
Trout Lake	1	1	1	13		1.38	1.43	.51	1.59	.73	.60	.86	1.6	2.2	2.9	.152	.196
New Brunswick																	
CANSAP																	
Acadia Fes	3	3	1	3		2.78	2.66	.21	2.70	.52	2.10	2.10	3.0	3.0	3.0	.385	.385
Charlo	3	3	1	3		2.51	2.68	.43	2.86	1.33	2.10	2.10	2.1	4.4	4.4	.385	.385
St. John	3	3	1	3		3.98	3.87	.23	3.93	.83	3.00	3.00	4.2	4.6	4.6	.292	.308
Newfoundland																	
CANSAP																	
Goose	2	2B	1	3		.98	1.05	.23	1.07	.23	.80	.80	1.2	1.2	1.2	.385	.385
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	2	2A	2	3		2.22	2.37	.36	2.46	.81	1.60	1.60	2.6	3.2	3.2	.232	.269
Shelburne	2	2A	1	3		3.30	3.76	.68	4.33	2.55	1.80	1.80	4.3	6.9	6.9	.176	.244
Truro	3	3	2	3		4.53	4.53	.03	4.53	.15	4.40	4.40	4.5	4.7	4.7	.253	.249
APN																	
Kejimikujik (b)	2	2A	1	17		2.13	2.38	.90	3.37	2.81	.50	1.25	2.4	5.8	9.9	.231*	.102



Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 3

Sulfate

State	Network	Overall	Site	Data	N	N	Wtd	Geometric	SD	Concentration						K-S		
										Mean	Mean	SD	Arithmetic	SD	Min	Percentiles		
	Site Name	Rating	Rep	Comp		BDL	mg/l	mg/l	mg/l	mg/l	mg/l		25%	50%	75%	Max	Gau	
Ontario																		
CANSAP																		
	Atikokan	3	3	1	3		1.27	1.26	.12	1.27	.15	1.10	1.10	1.3	1.4	1.4	.253	.266
	Dorset (a)	3	1	3	2		2.80	2.78	.40	2.90	1.13	2.10		2.9		3.7	.260	.260
	Harrow	3	3	1	3		4.34	4.28	.11	4.30	.46	3.90	3.90	4.2	4.8	4.8	.253	.241
	Kingston	3	3	1	3		5.12	5.39	.42	5.69	2.16	3.40	3.40	6.0	7.7	7.7	.222	.267
	Mount Forest (a)	3	3	1	3		6.77	6.88	.24	7.03	1.80	5.79	5.79	6.2	9.1	9.1	.345	.335
	Simcoe	3	3	1	3		4.94	4.99	.16	5.03	.81	4.30	4.30	4.9	5.9	5.9	.232	.213
APN																		
	Chalk River	2	2A	1	40		3.22	3.44	.75	4.52	3.74	.70	1.90	3.6	6.0	20.2	.154*	.091
	Long Point	3	3	1	24		4.10	4.36	.64	5.34	4.10	1.00	3.05	4.5	6.5	20.6	.223*	.107
APIOS-C																		
	Bear Island	2	2A	1	3		3.49	3.43	.33	3.55	1.04	2.35	2.35	4.0	4.2	4.2	.351	.359
	Dorset (c)	1	1	1	3		3.97	3.92	.49	4.22	1.83	2.30	2.30	4.4	5.9	5.9	.207	.261
	Killarney	3	2A	3	2		4.65	4.51	.19	4.55	.85	3.95		4.5		5.1	.260	.260
	Ramsey	2	2A	2	3		2.09	2.11	.40	2.23	.97	1.60	1.60	1.7	3.3	3.3	.358	.345
Quebec																		
CANSAP																		
	Chibougamau	3	3	1	3		1.49	1.38	.68	1.60	1.01	.70	.70	1.4	2.7	2.7	.245	.177
	Fort Chimo	2	2B	2	3		.84	.82	.18	.83	.15	.70	.70	0.8	1.0	1.0	.254	.233
	Maniwaki	2	2B	1	3		3.36	3.37	.17	3.40	.56	2.80	2.80	3.5	3.9	3.9	.238	.256
	Nitchequon	2	2B	1	3		1.30	1.37	.50	1.50	.79	.90	.90	1.2	2.4	2.4	.314	.272
	Quebec City	3	3	1	3		4.19	4.24	.30	4.36	1.18	3.00	3.00	5.0	5.1	5.1	.370	.373
	St. Hubert	3	3	1	3		3.71	4.18	.49	4.50	1.87	2.40	2.40	5.1	6.0	6.0	.292	.323

Table 5(a)

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	Col	N	N	Wtd	SO4	%	Sea	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Eff	N	BDL	mg/l	Dep	g/m2	Correction	Salt	Precip
																		cm
Delaware MAP3s/PCN Lewes	Sep 1 80	Dec 1 80	2	2A	1	100	100	99	94	112	17		2.22	.48				21.7
												1	1.67	.36		10		
Indiana NADP Indiana Dunes	Sep 2 80	Dec 2 80	3	3	1	100	100	85	85	99	11		4.36	.64				14.6
UAPSP Fort Wayne	Sep 1 80	Dec 1 80	2	2A	1	100	99	97	88	95	22		2.80	.41				14.5
Rockport	Sep 1 80	Dec 1 80	3	3	2	100	100	99	92	75	12		2.44	.54				22.0
Massachusetts UAPSP Turners Falls	Sep 1 80	Dec 1 80	2	2A	1	100	100	100	100	98	18		2.21	.41				18.4
Michigan NADP Douglas Lake	Sep 2 80	Dec 2 80	2	1	2	92	100	92	100	95	12		2.85	.35				12.1
Kellogg	Sep 2 80	Dec 2 80	2	2A	2	92	100	92	100	98	12		3.60	.55				15.3
Wellston	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	96	13		2.09	.51				24.3
New Hampshire NADP Hubbard Brook	Sep 2 80	Dec 2 80	2	1	2	92	100	92	100	100	11		2.75	.79				28.9
New York NADP Aurora	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	93	13		3.22	.70				21.6
Chautauqua	Sep 2 80	Dec 2 80	2	2A	1	100	90	85	85	97	11		2.53	.88				34.9
Huntington	Sep 2 80	Dec 2 80	2	2B	2	92	91	85	92	103	11		2.53	.56				22.0
Jasper	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	96	13		1.78	.26				14.8
Stillwell Lake	Sep 2 80	Dec 2 80	2	2B	2	92	100	85	92	88	11		2.26	.58				25.6
MAP3s/PCN Brookhaven	Sep 1 80	Dec 1 80	2	2B	1	99	97	97	87	83	13		1.43	.30				21.0
													1.24	.26				
Ithaca	Sep 1 80	Dec 1 80	2	2A	1	100	92	96	83	97	19		2.99	.80				26.8
Whiteface	Sep 1 80	Dec 1 80	1	1	1	100	100	99	96	105	25		2.38	.77				32.5
North Carolina NADP Clinton Station	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	94	12		1.71	.54				31.7
Coveeta	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	92	11		1.64	.56				34.3
Finley (A)	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	98	12		2.27	.54				23.7
Lewiston	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	96	12		1.59	.37				23.4
												1	1.50	.35				
Piedmont Station	Sep 2 80	Dec 2 80	2	2A	1	100	100	85	85	92	11		2.53	.80				31.7
UAPSP Raleigh	Sep 1 80	Dec 1 80	3	3	1	100	99	98	91	94	21		2.00	.47				23.7
Ohio NADP Caldwell	Sep 2 80	Dec 2 80	2	2B	2	92	100	92	100	99	11		3.07	.42				13.6
Delaware	Sep 2 80	Dec 2 80	2	2A	1	100	100	85	85	92	11		3.21	.50				15.7
Wooster	Sep 2 80	Dec 2 80	3	3	2	92	100	85	92	94	11		3.35	.42				12.7
UAPSP Zanesville	Sep 1 80	Dec 1 80	3	3	2	100	98	99	95	76	21		2.49	.57				23.0

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 2

Sulfate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	SO4	%	Sea Salt	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col		BDL	Mean	Dep	Correction		Precip
	Date	Date								Eff			mg/l	g/m2		cm	cm
Pennsylvania																	
NADP																	
Leading Ridge	Sep 2 80	Dec 2 80	2	1	2	92	100	92	100	91	12		2.86	.63			22.1
MAP3a/PCN																	
Penn State	Sep 1 80	Dec 1 80	2	2B	1	100	100	99	94	102	15		2.01	.36			17.7
UAPSP																	
Scranton	Sep 1 80	Dec 1 80	2	2A	1	100	100	100	100	100	20		2.06	.36			17.6
South Carolina																	
NADP																	
Clemson	Sep 2 80	Dec 2 80	3	3	1	100	100	85	85	98	11		1.86	.62			33.4
Tennessee																	
NADP																	
Walker Branch	Sep 2 80	Dec 2 80	2	2A	2	92	100	85	92	105	11		3.58	.68			19.1
West Virginia																	
NADP																	
Parsons	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	95	13		3.00	.71			23.6
UAPSP																	
Lewisburg	Sep 1 80	Dec 1 80	2	2A	2	100	100	100	100	70	17		1.76	.20			11.6
Wisconsin																	
NADP																	
Trout Lake	Sep 2 80	Dec 2 80	1	1	1	100	100	92	92	93	12		1.84	.43			23.3
New Brunswick																	
CANSAP																	
Acadia Fes	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	88	3		2.29	1.02			44.3
Charlo	Aug 30 80	Nov 30 80	3	3	1	100	100	100	100	81	3		2.82	.89			31.7
													2.62	.83			
St. John	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	86	3		2.43	1.09			45.0
													2.17	.98		10	
Newfoundland																	
CANSAP																	
Gander	Sep 1 80	Dec 1 80	3	3	2	100	100	100	100	70	3		1.41	.51			36.0
													1.00	.36		23	
Goose	Aug 31 80	Dec 1 80	2	2B	1	100	100	100	100	86	3		.83	.30			36.1
													.78	.28		5	
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	Aug 31 80	Nov 30 80	2	2A	1	100	100	100	100	102	3		1.83	.72			39.3
													1.60	.63		10	
Shelburne	Aug 31 80	Nov 30 80	2	2A	2	100	100	100	100	95	3		1.55	.63			40.4
													1.02	.41		36	
Truro	Sep 1 80	Nov 30 80	3	3	2	100	100	100	100	79	3		2.62	.84			32.2
													2.44	.79		6	

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 3

Sulfate

State Network Site Name	Period First Date	Summarized Last Date	Overall Rating	Site Rep	Data Comp	% PCL	% TP	% VSL	% VSMP	% Col Eff	N	N BDL	Wtd Mean mg/l	SO4 Dep g/m2	% Sea Correction	Total Salt Precip cm
<b>Ontario</b>																
CANSAP																
Atikokan	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	92	3		1.34	.33		25.0
Dorset (a)	Sep 1 80	Nov 27 80	1	1	1	100	100	100	100	82	3		3.11	.87		28.1
ELA (a)	Aug 31 80	Nov 30 80	2	2A	1	100	100	100	100	83	3		.84	.13		15.9
Harrow	Sep 2 80	Nov 30 80	3	3	1	100	100	100	100	84	3		5.49	.78		14.2
Moosonee	Sep 1 80	Nov 30 80	2	2B	1	100	100	100	100	81	3		1.12	.26		23.4
													1.05	.25	6	
Mount Forest (a)	Sep 1 80	Dec 1 80	3	3	1	100	100	100	100	91	3		3.35	.97		28.9
Simcoe	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	96	3		3.40	.76		22.5
Trout Lake	Aug 31 80	Nov 30 80	3	2B	3	100	69	66	67	83	2		.86	.20		23.5
APIOS-D																
Dorset (b)	Sep 1 80	Dec 1 80	1	1	1	100	100	99	97	98	35		2.46	.68		27.7
Longwoods (b)	Sep 1 80	Dec 1 80	2	2B	1	100	97	97	88	99	22		3.76	.72		19.2
Railton	Sep 1 80	Dec 1 80	2	1	2	100	98	93	79	98	22		2.96	.75		25.5
APN																
Chalk River	Sep 1 80	Dec 1 80	2	2A	1	99	98	93	88	97	35		2.88	.78		27.1
ELA (b)	Sep 1 80	Dec 1 80	2	2A	1	100	99	98	93	85	26	2	.89	.14		15.9
Long Point	Sep 1 80	Dec 1 80	3	3	1	100	99	99	96	98	24		3.62	.78		21.4
APIOS-C																
Alvinston	Sep 1 80	Nov 28 80	2	2A	2	95	100	95	100	73	3		4.90	.86		17.5
Campbellford	Sep 1 80	Nov 28 80	2	2A	2	97	100	97	100	69	3		3.16	.59		18.7
Colchester	Sep 1 80	Nov 28 80	2	2A	1	99	100	99	100	92	3		4.90	.52		10.7
Dalhousie Mills	Sep 1 80	Nov 28 80	3	2B	3	98	100	98	100	57	3		3.40	.96		28.2
Dorion	Sep 1 80	Nov 28 80	1	1	1	99	100	99	100	85	3		1.33	.36		27.4
Dorset (c)	Sep 2 80	Nov 28 80	1	1	1	100	100	100	100	97	3		2.25	.59		26.2
Ear Falls	Sep 1 80	Nov 30 80	3	3	2	99	100	99	100	66	3		.69	.11		15.5
Golden Lake	Sep 1 80	Dec 1 80	2	1	2	99	100	99	100	61	3		2.56	.68		26.6
Gowganda	Sep 2 80	Nov 28 80	2	2A	1	100	100	100	100	94	3		2.30	.45		19.7
Kaladar	Sep 1 80	Nov 28 80	3	1	3	99	100	99	100	59	3		2.86	.81		28.2
Killarney	Sep 2 80	Nov 28 80	2	2A	1	100	100	100	100	93	3		3.02	.62		20.5
Moonbeam	Sep 1 80	Dec 2 80	2	2A	2	99	100	99	100	61	3		2.71	.41		15.2
Nakina	Sep 1 80	Nov 28 80	3	3	3	99	67	64	67	106	2		.98	.14		14.2
Palmerson	Sep 1 80	Nov 28 80	2	2A	2	99	100	99	100	61	3		4.12	1.08		26.3
Port Stanley	Sep 1 80	Nov 28 80	3	2B	3	99	100	99	100	58	3		4.48	.99		22.1
Ramsey	Sep 2 80	Nov 28 80	2	2A	1	100	100	100	100	81	3		2.10	.40		19.0
Smith's Falls	Sep 1 80	Nov 28 80	3	3	3	98	73	66	67	54	2		3.66	.91		24.8
Uxbridge	Sep 1 80	Nov 30 80	2	2B	2	99	100	99	100	63	3		3.41	.72		21.2
Waterloo	Sep 1 80	Nov 28 80	2	2A	2	100	100	100	100	66	3		3.36	.61		18.1
Whitney	Sep 1 80	Nov 28 80	1	1	1	99	100	99	100	87	3		2.18	.52		23.7
Wilkesport	Sep 1 80	Nov 28 80	2	2A	2	98	100	98	100	80	3		5.10	.78		15.3
<b>Quebec</b>																
CANSAP																
Chibougamau	Aug 31 80	Dec 2 80	3	3	2	100	100	100	100	63	3		1.74	.59		33.8
Nitchequon	Aug 31 80	Nov 30 80	2	2B	2	100	100	100	100	61	3	1	.64	.15		22.8
Quebec City	Aug 31 80	Dec 5 80	3	3	1	100	100	100	100	85	3		3.25	1.38		42.6
Sept Isles	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	81	3		1.63	.63		38.6
													1.39	.53	15	
St. Hubert	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	86	3		3.60	1.22		33.9

Table 5(b)

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)28-Jun-1985  
Page 1

## Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
Delaware																	
MAP3a/PCN																	
Leves	2	2A	1	17		2.22	2.28	.56	2.63	1.45	1.06	1.39	1.8	3.9	5.7	.240*	.184
Indiana																	
NADP																	
Indiana Dunes	3	3	1	11		4.36	5.35	.61	6.32	3.90	2.04	4.19	5.3	9.8	14.9	.275*	.169
UAPSP																	
Fort Wayne	2	2A	1	22		2.80	2.76	.67	3.40	2.19	.80	1.53	2.8	4.8	8.8	.207*	.208*
Rockport	3	3	2	12		2.44	2.63	.46	2.96	1.77	1.75	1.96	2.2	3.2	7.4	.312*	.281*
Massachusetts																	
UAPSP																	
Turners Falls	2	2A	1	18		2.21	2.41	1.00	3.44	2.64	.17	1.29	2.9	5.1	9.4	.188	.139
Michigan																	
NADP																	
Douglas Lake	2	1	2	12		2.85	2.62	.41	2.81	1.00	1.03	2.02	2.9	3.6	4.2	.179	.179
Kellogg	2	2A	2	12		3.60	3.65	.50	4.08	2.00	1.67	2.58	3.1	5.8	7.3	.237	.201
Wellston	2	2A	1	13		2.09	2.03	.54	2.27	1.01	.79	1.33	2.5	3.0	3.9	.134	.215
New Hampshire																	
NADP																	
Hubbard Brook	2	1	2	11		2.75	2.31	.76	2.93	2.00	.56	1.28	2.7	3.7	6.5	.170	.132
New York																	
NADP																	
Aurora	2	2A	1	13		3.22	3.46	.72	4.10	1.80	.74	3.00	4.6	5.6	6.3	.193	.285*
Chautauqua	2	2A	1	11		2.53	2.62	.42	2.81	.95	1.11	1.97	3.3	3.6	3.8	.230	.244
Huntington	2	2B	2	11		2.53	2.41	.71	2.89	1.52	.48	1.95	2.8	4.0	5.1	.113	.201
Jasper	2	2A	1	13		1.78	2.42	1.07	3.41	2.16	.25	2.12	2.9	5.1	7.6	.136	.271*
Stillwell Lake	2	2B	2	11		2.26	2.45	.73	3.11	2.29	.76	1.23	2.5	3.9	7.7	.223	.120
MAP3a/PCN																	
Brookhaven	2	2B	1	13		1.43	1.85	.66	2.30	1.82	.68	1.10	1.6	2.8	7.6	.220	.113
Ithaca	2	2A	1	19		2.99	2.61	1.15	3.88	3.17	.07	2.50	3.0	5.2	13.4	.237*	.274*
Whiteface	1	1	1	25		2.38	2.06	.67	2.53	1.71	.61	1.20	2.5	3.6	8.4	.143	.133
North Carolina																	
NADP																	
Clinton Station	2	2A	1	12		1.71	1.78	.61	2.04	1.00	.41	1.37	1.8	2.7	4.1	.184	.232
Coweeta	2	2A	1	11		1.64	1.83	.60	2.17	1.45	.99	1.01	1.6	3.2	5.6	.261*	.180
Finley (A)	2	2A	1	12		2.27	2.04	.44	2.21	.86	.79	1.55	2.1	3.0	3.8	.120	.110
Lewiston	2	2A	1	12		1.59	1.96	1.03	2.96	2.95	.19	1.01	2.6	3.4	11.3	.273*	.186
Piedmont Station	2	2A	1	11		2.53	2.53	.64	3.10	2.30	1.06	1.61	2.2	3.7	8.7	.217	.142
UAPSP																	
Raleigh	3	3	1	21		2.00	1.79	.65	2.14	1.23	.47	1.24	1.9	2.9	4.8	.135	.137
Ohio																	
NADP																	
Caldwell	2	2B	2	11		3.07	3.93	.70	4.95	3.63	1.46	2.30	3.5	7.9	12.4	.202	.144
Delaware	2	2A	1	11		3.21	3.56	.46	3.92	1.79	2.03	2.39	3.6	5.9	6.9	.209	.187
Wooster	3	3	2	11		3.35	3.58	.46	3.93	1.79	1.97	2.35	3.3	6.0	6.8	.184	.181
UAPSP																	
Zanesville	3	3	2	21		2.49	3.03	.76	3.92	2.74	.76	1.57	3.1	5.8	9.0	.183	.129

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 2

Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Concentration					K-S		
											Min	25%	50%	75%	Max	D-Statistic Gau	Log	
-----																		
Pennsylvania																		
NADP																		
Leading Ridge	2	1	2	12		2.86	3.09	.94	4.19	2.69	.48	1.54	3.6	6.9	8.3	.153	.198	
MAP3a/PCN																		
Penn State	2	2B	1	15		2.01	3.12	1.14	5.47	7.59	.28	2.30	3.6	5.8	31.7	.342*	.217	
UAPSP																		
Scranton	2	2A	1	20		2.06	2.45	.88	3.16	1.82	.21	1.96	3.1	4.7	6.5	.087	.196*	
South Carolina																		
NADP																		
Clemson	3	3	1	11		1.86	1.78	.67	2.07	.93	.37	1.61	2.2	2.8	3.4	.136	.257*	
Tennessee																		
NADP																		
Walker Branch	2	2A	2	11		3.58	3.97	.47	4.41	2.27	2.38	2.59	3.3	6.7	9.1	.268*	.206	
West Virginia																		
NADP																		
Parsons	2	2A	1	13		3.00	3.41	.62	4.02	2.23	1.35	1.77	4.9	5.4	8.3	.199	.263*	
UAPSP																		
Lewisburg	2	2A	2	17		1.76	2.27	.72	2.82	1.84	.45	1.28	2.3	3.8	7.5	.150	.116	
Wisconsin																		
NADP																		
Trout Lake	1	1	1	12		1.84	1.66	.60	1.93	1.05	.56	1.00	1.9	2.6	3.8	.142	.172	
New Brunswick																		
CANSAP																		
Acadia Fee	3	3	1	3		2.29	2.09	.47	2.26	1.16	1.50	1.50	1.7	3.6	3.6	.354	.337	
Charlo	3	3	1	3		2.82	2.69	.20	2.73	.58	2.40	2.40	2.4	3.4	3.4	.385	.385	
St. John	3	3	1	3		2.43	2.35	.37	2.46	.99	1.80	1.80	2.0	3.6	3.6	.349	.333	
Newfoundland																		
CANSAP																		
Gander	3	3	2	3		1.41	1.26	.32	1.30	.40	.90	.90	1.3	1.7	1.7	.175	.208	
Goose	2	2B	1	3		.83	.83	.07	.83	.06	.80	.80	0.8	0.9	0.9	.385	.385	
Nova Scotia																		
CANSAP																		
Kejimikujik (a)	2	2A	1	3		1.83	1.79	.71	2.06	1.14	.80	.80	2.4	3.0	3.0	.282	.327	
Shelburne	2	2A	2	3		1.55	1.60	.25	1.63	.38	1.20	1.20	1.8	1.9	1.9	.337	.346	
Truro	3	3	2	3		2.62	2.67	.36	2.80	1.06	2.00	2.00	2.4	4.0	4.0	.314	.286	

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 3

Sulfate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	50%	75%	Max	D-Statistic Gau	Log
Ontario																	
CANSAP																	
Atikokan	3	3	1	3		1.34	1.24	.28	1.27	.32	.90	.90	1.4	1.5	1.5	.328	.340
Dorset (a)	1	1	1	3		3.11	3.19	.45	3.40	1.31	1.90	1.90	4.0	4.3	4.3	.343	.356
ELA (a)	2	2A	1	3		.84	.68	.48	.73	.31	.40	.40	0.8	1.0	1.0	.253	.295
Harrow	3	3	1	3		5.49	5.68	.36	5.93	2.12	4.00	4.00	5.6	8.2	8.2	.229	.183
Moosonee	2	2B	1	3		1.12	1.16	.44	1.23	.47	.70	.70	1.4	1.6	1.6	.305	.330
Mount Forest (a)	3	3	1	3		3.35	3.53	.49	3.83	1.89	2.20	2.20	3.4	5.9	5.9	.257	.198
Simcoe	3	3	1	3		3.40	3.48	.46	3.73	1.66	2.20	2.20	3.5	5.5	5.5	.222	.176
Trout Lake	3	2B	3	2		.86	1.21	.78	1.40	.99	.70		1.4		2.1	.260	.260
APIOS-D																	
Dorset (b)	1	1	1	35		2.46	2.24	.76	2.92	2.22	.40	1.15	2.3	3.7	10.8	.153*	.108
Longwoods (b)	2	2B	1	22		3.76	3.01	.57	3.52	2.11	1.20	1.90	2.9	4.4	8.2	.206*	.104
Railton	2	1	2	22		2.96	3.24	.81	4.15	2.67	.30	1.63	4.1	5.5	11.8	.124	.160
APN																	
Chalk River	2	2A	1	35		2.88	3.11	.74	3.94	2.80	.40	2.10	3.3	5.0	13.4	.178*	.084
ELA (b)	2	2A	1	26	2	.89	.81	.86	1.09	.84	.20	.50	0.8	1.5	3.7	.220*	.115
Long Point	3	3	1	24		3.62	3.78	.61	4.48	2.64	1.20	2.25	3.8	6.6	11.6	.146	.105
APIOS-C																	
Alvinston	2	2A	2	3		4.90	5.01	.35	5.20	1.60	3.35	3.35	6.1	6.1	6.1	.379	.381
Campbellford	2	2A	2	3		3.16	3.53	.43	3.77	1.69	2.40	2.40	3.2	5.6	5.6	.287	.243
Colchester	2	2A	1	3		4.90	4.98	.26	5.10	1.38	4.00	4.00	4.6	6.6	6.6	.294	.271
Dalhousie Mills	3	2B	3	3		3.40	3.33	.21	3.38	.74	2.75	2.75	3.2	4.2	4.2	.264	.241
Dorion	1	1	1	3		1.33	1.12	.57	1.23	.63	.60	.60	1.2	1.8	1.8	.178	.246
Dorset (c)	1	1	1	3		2.25	1.88	.69	2.17	1.30	.90	.90	2.1	3.5	3.5	.187	.232
Ear Falls	3	3	2	3		.69	.61	.18	.62	.12	.55	.55	0.5	0.8	0.8	.385	.385
Golden Lake	2	1	2	3		2.56	2.46	.55	2.72	1.48	1.45	1.45	2.3	4.3	4.3	.264	.199
Gowganda	2	2A	1	3		2.30	2.27	.03	2.27	.08	2.20	2.20	2.2	2.3	2.3	.253	.249
Kaladar	3	1	3	3		2.86	2.36	.61	2.68	1.72	1.45	1.45	1.9	4.6	4.6	.332	.290
Killarney	2	2A	1	3		3.02	2.95	.13	2.97	.38	2.55	2.55	3.0	3.3	3.3	.253	.266
Moonbeam	2	2A	2	3		2.71	2.06	.65	2.33	1.24	1.00	1.00	2.5	3.4	3.4	.236	.295
Nakina	3	3	3	2		.98	1.00	.07	1.00	.07	.95		1.0		1.0	.260	.260
Palmerson	2	2A	2	3		4.12	4.24	.21	4.30	.87	3.35	3.35	4.5	5.0	5.0	.258	.278
Port Stanley	3	2B	3	3		4.48	4.76	.56	5.28	2.98	2.85	2.85	4.4	8.6	8.6	.283	.223
Ramsey	2	2A	1	3		2.10	1.83	.30	1.88	.51	1.30	1.30	2.1	2.2	2.2	.331	.343
Smith's Falls	3	3	3	2		3.66	3.62	.24	3.67	.88	3.05		3.7		4.3	.260	.260
Uxbridge	2	2B	2	3		3.41	3.42	.29	3.52	1.05	2.70	2.70	3.1	4.7	4.7	.303	.279
Waterloo	2	2A	2	3		3.36	3.63	.45	3.88	1.80	2.45	2.45	3.3	5.9	5.9	.294	.250
Whitney	1	1	1	3		2.18	1.79	.70	2.10	1.41	.90	.90	1.7	3.6	3.6	.265	.180
Wilkesport	2	2A	2	3		5.10	5.50	.26	5.63	1.56	4.45	4.45	5.0	7.4	7.4	.313	.293
Quebec																	
CANSAP																	
Chibougamau	3	3	2	3		1.74	1.79	.14	1.80	.26	1.60	1.60	1.7	2.1	2.1	.314	.304
Nitchequon	2	2B	2	3	1	.64	.48	1.36	.73	.57	.20	.20	0.9	1.2	1.2	.269	.330
Quebec City	3	3	1	3		3.25	3.28	.10	3.30	.35	3.10	3.10	3.1	3.7	3.7	.385	.385
Sept Isles	3	3	1	3		1.63	1.63	.41	1.73	.76	1.20	1.20	1.4	2.6	2.6	.337	.314
St. Hubert	3	3	1	3		3.60	3.48	.13	3.50	.44	3.00	3.00	3.7	3.8	3.8	.343	.348

Table 6(a)

1980 Annual Unified Data Summary

30-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	NO3	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col		BDL	Mean	Dep	Precip
	Date	Date								Eff			mg/l	g/m2	cm
Delaware															
MAP3a/PCN															
Lewes	Jan 1 80	Jan 1 81	2	2A	2	100	99	97	84	87	62		1.46	1.33	91.6
Illinois															
NADP															
Dixon Springs	Jan 2 80	Dec 30 80	3	2B	3	93	100	71	77	91	37		1.58	1.34	84.6
Indiana															
UAPSP															
Roanoke	Jan 1 80	Jan 1 81	2	2A	2	100	97	93	79	92	90		1.94	1.70	88.0
Rockport	Jan 1 80	Jan 1 81	3	3	1	100	100	99	97	94	76		1.20	1.11	92.5
New Hampshire															
NADP															
Hubbard Brook	Jan 2 80	Dec 30 80	2	1	2	90	99	85	93	99	43		1.84	1.59	86.8
New York															
NADP															
Aurora	Jan 3 80	Dec 30 80	2	2A	2	90	100	85	94	93	44		2.46	1.96	79.6
Knobbit	Jan 1 80	Dec 30 80	2	2A	2	90	89	77	87	96	40		2.03	1.32	64.8
MAP3a/PCN															
Brookhaven	Jan 1 80	Jan 1 81	2	2B	1	100	99	98	88	91	57		1.63	1.32	81.1
Ithaca	Jan 1 80	Jan 1 81	2	2A	1	100	98	98	94	94	74		1.92	1.82	94.9
Whiteface	Jan 1 80	Jan 1 81	1	1	1	100	98	97	90	113	81	1	<u>1.59</u>	<u>1.51</u>	<u>94.5</u>
North Carolina															
NADP															
Clinton Station	Jan 2 80	Dec 30 80	2	2A	2	98	100	88	90	89	45		.99	1.15	116.5
Coweeta	Jan 2 80	Dec 30 80	2	2A	2	94	99	87	94	93	44		.84	1.32	157.5
Lewiston	Jan 2 80	Dec 30 80	2	2A	2	94	95	85	90	86	44	1	1.28	1.12	87.3
Piedmont Station	Jan 2 80	Dec 30 80	2	2A	1	96	99	81	84	94	42		1.43	1.43	99.9
UAPSP															
Raleigh	Jan 1 80	Jan 1 81	3	3	1	100	95	96	82	87	68		1.12	1.06	94.1
Ohio															
NADP															
Caldwell	Jan 2 80	Dec 30 80	2	2B	2	94	97	88	94	103	45		2.01	1.96	97.4
Delaware	Jan 2 80	Dec 30 80	2	2A	1	96	100	88	92	93	46		2.21	2.40	108.6
Wooster	Jan 2 80	Dec 30 80	3	3	1	96	97	87	90	95	44		1.86	1.69	90.6
UAPSP															
Zanesville	Jan 1 80	Jan 1 81	3	3	2	100	99	99	95	88	95		1.75	2.33	133.2
Pennsylvania															
NADP															
Leading Ridge	Jan 2 80	Dec 30 80	2	1	2	92	100	90	98	92	47		2.06	1.90	92.5
MAP3a/PCN															
Penn State	Jan 1 80	Jan 1 81	2	2B	1	100	100	99	95	122	75		<u>1.92</u>	<u>1.65</u>	<u>86.0</u>
UAPSP															
Scranton	Jan 1 80	Jan 1 81	2	2A	1	100	100	100	100	99	81		1.74	1.12	64.2

Note: The annual data completeness level also depends on the quarterly data completeness levels



## 1980 Annual Unified Data Summary

30-Jun-1985  
Page 2

## Nitrate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	%	%	N	N	Wtd	NO3	Total
	First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	Eff	N	BDL	Mean	mg/l	g/m2	Precip cm
South Carolina																	
NADP																	
Clemson	Jan 2 80	Dec 30 80	3	3	2	90	100	79	87	99	40			.96	1.19	123.3	
Virginia																	
MAP3a/PCN																	
Virginia	Jan 1 80	Jan 1 81	3	2A	3	99	83	93	74	93	60			1.70	1.44	84.5	
West Virginia																	
NADP																	
Parsons	Jan 2 80	Dec 30 80	2	2A	1	96	100	96	100	92	50			2.03	2.49	122.3	
UAPSP																	
Lewisburg	Jan 1 80	Jan 1 81	2	2A	2	100	97	98	94	96	78			1.17	.87	74.2	
New Brunswick																	
CANSAP																	
Acadia Fes	Dec 31 79	Jan 1 81	3	3	1	100	100	100	100	88	12			1.15	1.45	126.5	
Charlo	Dec 31 79	Dec 31 80	3	3	3	100	100	100	100	72	12			.78	1.01	130.5	
St. John	Dec 31 79	Jan 1 81	3	3	2	100	100	100	100	80	12	1	1.26	1.76	139.2		
Newfoundland																	
CANSAP																	
Goose	Dec 31 79	Jan 1 81	2	2B	2	100	92	92	92	76	11	3	.19	.21	114.6		
Nova Scotia																	
CANSAP																	
Kejinkujik (a)	Dec 31 79	Jan 1 81	2	2A	2	100	92	91	92	100	11			.71	.82	115.1	
Truro	Dec 31 79	Dec 31 80	3	3	2	100	100	100	100	75	12			1.09	1.17	107.2	
Ontario																	
CANSAP																	
Dorset (a)	Jan 2 80	Dec 31 80	3	1	3	100	87	82	77	78	10			1.89	2.39	126.4	
Harrow	Dec 31 79	Dec 31 80	3	3	3	100	100	100	100	79	12			2.68	2.62	97.7	
Kingston	Dec 31 79	Dec 31 80	3	3	3	100	78	83	77	79	10			3.34	3.45	103.3	
Mount Forest (a)	Dec 31 79	Jan 1 81	3	3	2	100	93	92	92	77	11			3.18	3.08	96.8	
Simcoe	Dec 31 79	Jan 1 81	3	3	2	100	92	91	92	89	11			2.86	2.49	87.0	
APN																	
Chalk River	Jan 1 80	Jan 1 81	3	2A	3	100	92	85	67	94	103	1	1.92	1.84	95.8		
Long Point	Jan 1 80	Jan 1 81	3	3	3	100	94	92	75	95	85			2.91	2.55	87.5	
Quebec																	
CANSAP																	
Chibougamau	Dec 31 79	Dec 31 80	3	3	3	100	100	100	100	66	12			.92	.91	99.2	
Nitchequon	Dec 31 79	Jan 1 81	3	2B	3	100	97	91	92	70	11	3	.14	.12	84.7		
Quebec City	Dec 31 79	Jan 1 81	3	3	2	100	100	100	100	83	12			1.94	2.24	115.7	

Note: The annual data completeness level also depends on the quarterly data completeness levels

Table 6(b)

1980 Annual Unified Data Summary

30-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Leves	2	2A	2	62		1.46	1.48	1.01	2.22	1.93	.07	.79	1.8	3.0	9.3	.154*	.097
Illinois																	
NADP																	
Dixon Springs	3	2B	3	37		1.58	1.87	.77	2.59	2.63	.55	1.09	1.8	3.1	12.6	.282*	.135
Indiana																	
UAPSP																	
Roanoke	2	2A	2	90		1.94	2.13	.65	2.59	1.65	.27	1.43	2.2	3.3	8.3	.130*	.040
Rockport	3	3	1	76		1.20	1.52	.69	1.96	1.93	.17	1.01	1.5	2.2	15.3	.218*	.075
New Hampshire																	
NADP																	
Hubbard Brook	2	1	2	43		1.84	1.88	.68	2.37	1.95	.37	1.27	1.9	2.7	12.0	.203*	.068
New York																	
NADP																	
Aurora	2	2A	2	44		2.46	2.70	.61	3.18	1.76	.56	1.88	2.7	4.2	9.3	.124	.102
Knobbit	2	2A	2	40		2.03	2.21	.96	3.21	2.99	.09	1.31	2.5	3.9	14.2	.233*	.119
MAP3s/PCN																	
Brookhaven	2	2B	1	57		1.63	1.82	.99	2.86	3.10	.14	.90	2.0	3.2	16.1	.243*	.071
Ithaca	2	2A	1	74		1.92	2.02	.78	2.61	1.88	.18	1.24	2.4	3.2	9.9	.157*	.092
Whiteface	1	1	1	81	1	1.59	1.48	.88	1.97	1.64	.02	.93	1.6	2.4	9.9	.176*	.106*
North Carolina																	
NADP																	
Clinton Station	2	2A	2	45		.99	1.15	.89	1.66	1.73	.09	.68	1.1	2.2	10.5	.183*	.066
Coveeta	2	2A	2	44		.84	1.09	.75	1.41	1.01	.15	.59	1.2	1.9	4.6	.145*	.106
Lewiston	2	2A	2	44	1	1.28	1.27	1.08	1.95	1.72	.05	.65	1.6	3.1	7.7	.183*	.116
Piedmont Station	2	2A	1	42		1.43	1.86	.75	2.43	1.83	.36	1.03	1.6	3.5	8.2	.193*	.095
UAPSP																	
Raleigh	3	3	1	68		1.12	1.32	.75	1.73	1.49	.26	.80	1.6	2.0	10.3	.187*	.125*
Ohio																	
NADP																	
Caldwell	2	2B	2	45		2.01	2.41	.69	3.09	2.62	.52	1.29	2.7	3.9	13.6	.198*	.103
Delaware	2	2A	1	46		2.21	2.32	.70	2.95	2.85	.14	1.67	2.3	3.3	19.8	.242*	.124
Wooster	3	3	1	44		1.86	2.21	.57	2.56	1.39	.52	1.63	2.3	3.2	6.8	.115	.100
UAPSP																	
Zanesville	3	3	2	95		1.75	1.94	.65	2.38	1.68	.29	1.28	2.1	2.9	11.1	.132*	.054
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	47		2.06	2.50	.70	3.02	1.66	.27	1.89	2.8	3.9	7.0	.103	.109
MAP3s/PCN																	
Penn State	2	2B	1	75		1.92	2.37	.72	3.00	2.13	.44	1.55	2.6	3.8	10.5	.131*	.085
UAPSP																	
Scranton	2	2A	1	81		1.74	2.11	.67	2.61	1.83	.30	1.44	2.2	3.4	10.9	.114*	.056

Note: The annual data completeness level also depends on the quarterly data completeness levels

## 1980 Annual Unified Data Summary

30-Jun-1985  
Page 2

## Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				Max	D-Statistic Gau
South Carolina																	
NADP																	
Clemson	3	3	2	40		.96	1.21	.75	1.55	1.10	.16	.75	1.2	2.1	4.6	.179*	.075
Virginia																	
MAP3a/PCN																	
Virginia	3	2A	3	60		1.70	1.91	.82	2.59	1.99	.35	1.01	1.9	3.5	9.3	.173*	.086
West Virginia																	
NADP																	
Parsons	2	2A	1	50		2.03	2.29	.63	2.78	1.91	.60	1.54	2.3	3.7	11.1	.164*	.063
UAPSP																	
Lewisburg	2	2A	2	78		1.17	1.30	.67	1.61	1.07	.29	.75	1.4	2.0	5.0	.122*	.066
New Brunswick																	
CANSAP																	
Acadia Fes	3	3	1	12		1.15	.99	.56	1.14	.61	.35	.62	1.1	1.5	2.6	.165	.162
Charlo	3	3	3	12		.78	.83	.58	.96	.58	.35	.50	0.8	1.3	2.3	.196	.110
St. John	3	3	2	12	1	1.26	.89	1.73	1.62	1.72	.01	.90	1.3	1.5	6.9	.370*	.372*
Newfoundland																	
CANSAP																	
Goose	2	2B	2	11	3	.19	.07	2.03	.26	.37	.01	.01	0.1	0.4	1.3	.267*	.201
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	2	2A	2	11		.71	.69	.91	.92	.60	.09	.58	0.8	1.3	2.2	.159	.239
Truro	3	3	2	12		1.09	1.03	.37	1.09	.37	.49	.78	1.1	1.4	1.7	.138	.126
Ontario																	
CANSAP																	
Dorset (a)	3	1	3	10		1.89	1.88	.49	2.09	.96	1.02	1.12	2.1	2.8	3.6	.198	.213
Harrow	3	3	3	12		2.68	2.77	.43	3.04	1.47	1.37	2.17	2.5	3.8	6.6	.209	.152
Kingston	3	3	3	10		3.34	3.61	.41	3.92	1.87	1.86	2.78	3.6	4.4	8.6	.238	.154
Mount Forest (a)	3	3	2	11		3.18	3.31	.42	3.59	1.60	1.86	2.44	3.2	4.5	7.1	.215	.146
Simcoe	3	3	2	11		2.86	2.97	.41	3.27	1.92	1.99	2.17	2.9	3.3	8.9	.363*	.256*
APH																	
Chalk River	3	2A	3	103	1	1.92	1.79	.97	2.50	2.01	.01	1.02	1.8	3.5	11.2	.138*	.069*
Long Point	3	3	3	85		2.91	3.06	.65	3.74	2.46	.71	1.91	3.2	4.9	13.1	.116*	.058
Quebec																	
CANSAP																	
Chibougamau	3	3	3	12		.92	.94	.78	1.14	.57	.13	.76	1.3	1.6	1.9	.150	.223
Nitchequon	3	2B	3	11	3	.14	.06	1.95	.19	.24	.00	.01	0.1	0.3	0.8	.245	.188
Quebec City	3	3	2	12		1.94	2.07	.41	2.24	1.00	1.15	1.38	2.1	2.7	4.7	.173	.108

Note: The annual data completeness level also depends on the quarterly data completeness levels

Table 7(a)

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	%	%	%	%	%	Wtd	NO3	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	N	BDL	Mean	Dep	Precip	mg/l	g/m2	cm
Delaware																		
MAP3s/PCN																		
Lewes	Dec 1 79	Mar 1 80	2	2A	2	100	97	96	78	79	14		1.77	.29	16.5			
UAPSP																		
Indian River	Dec 1 79	Mar 1 80	3	3	2	100	96	95	75	96	15		1.29	.24	18.4			
Georgia																		
NADP																		
Georgia Station	Dec 4 79	Mar 4 80	2	2A	1	100	100	100	100	123	13	1	.80	.18	22.0			
Illinois																		
NADP																		
Bondville	Dec 4 79	Mar 4 80	2	2A	2	92	99	85	92	70	11		2.93	.27	9.3			
Dixon Springs	Nov 27 79	Mar 4 80	2	2B	2	100	94	70	71	90	10		1.84	.33	18.1			
Indiana																		
UAPSP																		
Fort Wayne	Dec 1 79	Mar 1 80	2	2A	2	100	95	96	76	60	13		2.37	.27	11.3			
Rockport	Dec 1 79	Mar 1 80	3	3	1	100	99	99	94	98	17		1.49	.19	12.6			
Massachusetts																		
UAPSP																		
Montague	Dec 1 79	Mar 1 80	2	2A	1	100	100	100	100	98	7		1.37	.14	10.2			
Minnesota																		
NADP																		
Marcell	Dec 4 79	Mar 4 80	2	2B	2	100	99	77	75	62	9		1.37	.10	7.2			
New York																		
NADP																		
Huntington	Dec 4 79	Mar 4 80	2	2B	2	92	100	85	92	133	11		2.32	.25	10.7			
MAP3s/PCN																		
Brookhaven	Dec 1 79	Mar 1 80	2	2B	1	100	99	99	91	89	10		1.81	.28	15.2			
Ithaca	Dec 1 79	Mar 1 80	2	2A	2	100	100	100	100	71	15		2.56	.36	14.1			
Whiteface	Dec 1 79	Mar 1 80	2	1	2	100	86	96	71	155	10		2.09	.28	13.2			
North Carolina																		
NADP																		
Clinton Station	Dec 4 79	Mar 4 80	2	2A	2	100	100	100	100	70	13		1.10	.25	23.1			
Coweeta	Dec 4 79	Mar 4 80	2	2A	1	100	100	100	100	89	13		.86	.26	29.9			
Lewiston	Dec 4 79	Mar 4 80	2	2A	1	100	83	85	85	87	11		1.06	.28	25.9			
Piedmont Station	Dec 4 79	Mar 4 80	2	2A	1	100	93	85	85	93	11		.96	.17	17.4			
UAPSP																		
Raleigh	Dec 1 79	Mar 1 80	3	3	2	100	78	93	70	88	14		1.32	.27	20.3			
Ohio																		
NADP																		
Delaware	Dec 4 79	Mar 4 80	2	2A	2	92	100	85	92	84	11		1.90	.26	13.6			
Wooster	Dec 4 79	Mar 4 80	3	3	2	92	99	85	92	100	11		1.57	.16	10.0			
UAPSP																		
Zanesville	Dec 1 79	Mar 1 80	3	3	1	100	98	98	86	91	12		1.99	.25	12.8			
Pennsylvania																		
NADP																		
Leading Ridge	Dec 4 79	Mar 4 80	2	1	2	92	100	85	92	90	11		2.00	.24	11.9			
MAP3s/PCN																		
Penn State	Dec 1 79	Mar 1 80	2	2B	1	100	100	99	95	94	18		1.66	.20	11.9			
UAPSP																		
Scranton	Dec 1 79	Mar 1 80	2	2A	1	100	100	100	100	97	11		2.33	.15	6.6			

1  
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1

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 2

Nitrate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	NO3	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	N	BDL	Mean	Dep	Precip
	Date	Date								Eff			mg/l	g/m2	cm
South Carolina															
NADP															
Clemson	Dec 4 79	Mar 4 80	3	3	1	100	89	82	85	94	11		1.32	.29	22.2
Tennessee															
UAPSP															
Giles County	Dec 1 79	Mar 1 80	2	2A	1	100	99	97	88	99	22		1.34	.33	24.4
Virginia															
MAP3a/PCN															
Virginia	Dec 1 79	Mar 1 80	2	2A	2	100	96	93	70	87	14		1.88	.32	17.3
West Virginia															
NADP															
Parsons	Dec 4 79	Mar 4 80	2	2A	1	100	100	92	92	88	12		2.14	.37	17.2
UAPSP															
Lewisburg	Dec 1 79	Mar 1 80	2	2A	2	100	88	95	78	95	14		.95	.16	16.5
New Brunswick															
CANSAP															
Acadia Fes	Dec 1 79	Feb 29 80	3	3	1	100	100	100	100	80	3		.67	.13	19.6
Charlo	Dec 1 79	Feb 29 80	3	3	3	100	100	100	100	33	3		3.12	.56	18.0
St. John	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	61	3		2.78	.52	18.9
Newfoundland															
CANSAP															
Gander	Nov 30 79	Mar 1 80	3	3	3	100	100	100	100	32	3		.31	.09	30.4
Goose	Nov 30 79	Feb 29 80	3	2B	3	100	100	100	100	40	3		.17	.04	25.7
Nova Scotia															
CANSAP															
Truro	Dec 1 79	Feb 29 80	3	3	1	100	100	100	100	78	3		.73	.19	26.1
APN															
Kejimikujik (b)	Dec 1 79	Mar 1 80	2	2A	1	100	99	98	91	104	21	1	1.17	.21	17.9
Ontario															
CANSAP															
Atikokan	Nov 30 79	Feb 29 80	3	3	3	100	77	68	67	59	2		2.62	.18	6.8
Kingston	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	72	3		5.07	.75	14.8
Moosonee	Dec 1 79	Feb 29 80	3	2B	3	100	95	68	67	34	2		1.24	.11	9.0
Mount Forest (a)	Dec 1 79	Mar 3 80	3	3	1	100	100	100	100	59	3		3.40	.51	15.1
Peterborough	Nov 30 79	Feb 29 80	3	3	3	100	87	68	67	75	2		3.33	.53	15.8
Simcoe	Dec 1 79	Feb 29 80	3	3	1	100	100	100	100	68	3		3.64	.68	18.6
Quebec															
CANSAP															
Chibougamau	Nov 30 79	Feb 29 80	3	3	3	100	100	100	100	31	3		2.11	.30	14.2
Maniwaki	Nov 30 79	Feb 29 80	3	2B	3	100	88	69	67	42	2		5.24	.50	9.6
Nitchequon	Dec 1 79	Feb 29 80	3	2B	3	100	100	100	100	34	3		.66	.07	11.3
Quebec City	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	52	3		3.40	.40	11.9
St. Hubert	Nov 30 79	Feb 29 80	3	3	1	100	100	100	100	88	3		3.94	.42	10.6

Table 7(b)

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Lewes	2	2A	2	14		1.77	1.50	1.14	2.53	2.46	.28	.46	1.7	3.9	7.4	.250*	.154
UAPSP																	
Indian River	3	3	2	15		1.29	.96	1.36	1.96	2.18	.09	.31	1.2	3.2	7.6	.230*	.116
Georgia																	
NADP																	
Georgia Station	2	2A	1	13	1	.80	.59	1.36	.90	.64	.02	.45	0.9	1.2	2.6	.189	.204
Illinois																	
NADP																	
Bondville	2	2A	2	11		2.93	2.88	.88	4.05	3.61	.72	1.25	2.6	5.5	12.8	.202	.120
Dixon Springs	2	2B	2	10		1.84	2.20	.68	2.68	1.77	.68	1.54	2.2	3.8	6.3	.286*	.176
Indiana																	
UAPSP																	
Fort Wayne	2	2A	2	13		2.37	2.23	.69	2.76	1.84	.77	1.20	2.2	4.1	6.4	.188	.121
Rockport	3	3	1	17		1.49	1.67	.49	1.88	.98	.85	1.04	1.7	2.2	4.4	.168	.107
Massachusetts																	
UAPSP																	
Montague	2	2A	1	7		1.37	1.62	.71	1.99	1.33	.69	.71	2.1	2.7	4.4	.184	.216
Minnesota																	
NADP																	
Marcell	2	2B	2	9		1.37	1.16	.96	1.47	.68	.10	1.13	1.4	2.1	2.3	.146	.337*
New York																	
NADP																	
Huntington	2	2B	2	11		2.32	2.67	.59	3.08	1.71	.78	2.00	2.9	3.3	7.1	.257*	.208
MAP3s/PCN																	
Brookhaven	2	2B	1	10		1.81	1.49	.78	1.93	1.40	.48	.71	1.5	3.1	4.8	.205	.142
Ithaca	2	2A	2	15		2.56	2.33	.73	2.81	1.51	.30	1.55	3.0	3.4	6.2	.144	.178
Whiteface	2	1	2	10		2.09	2.34	.69	2.82	1.66	.68	1.35	2.8	3.8	5.8	.176	.157
North Carolina																	
NADP																	
Clinton Station	2	2A	2	13		1.10	.97	.82	1.26	.83	.20	.58	1.2	1.7	3.0	.110	.158
Coweeta	2	2A	1	13		.86	.79	.82	1.04	.74	.15	.49	0.9	1.6	2.6	.196	.124
Lewiston	2	2A	1	11		1.06	.78	.91	1.13	.99	.25	.30	0.6	1.7	3.4	.255*	.233
Piedmont Station	2	2A	1	11		.96	1.43	.74	1.85	1.48	.48	.75	1.2	3.2	4.8	.301*	.174
UAPSP																	
Raleigh	3	3	2	14		1.32	1.21	.84	1.57	1.00	.17	.62	1.6	2.1	3.7	.122	.159
Ohio																	
NADP																	
Delaware	2	2A	2	11		1.90	2.07	1.16	3.14	2.38	.14	1.10	2.8	4.0	7.3	.170	.220
Wooster	3	3	2	11		1.57	2.36	.67	2.79	1.52	.52	1.82	2.6	3.2	6.2	.205	.261*
UAPSP																	
Zanesville	3	3	1	12		1.99	1.75	.70	2.15	1.29	.69	.79	2.4	3.4	4.3	.198	.215
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	11		2.00	2.71	.78	3.34	1.74	.53	1.22	3.6	4.7	5.4	.182	.270*
MAP3s/PCN																	
Penn State	2	2B	1	18		1.66	2.63	1.03	3.63	2.30	.12	1.64	3.7	5.1	7.4	.118	.182
UAPSP																	
Scranton	2	2A	1	11		2.33	2.09	.63	2.48	1.47	.74	1.32	2.3	3.3	5.6	.142	.139

Winter Quarter 1980 Unified Data Summary  
(Dec 1979, Jan 1980, Feb 1980)

28-Jun-1985  
Page 2

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	Concentration										K-S D-Statistic Gau	Log	
					N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l					
												25%	50%	75%	Max		
South Carolina																	
NADP Clemson	3	3	1	11		1.32	1.40	.68	1.72	1.19	.42	.80	1.5	2.0	4.6	.208	.144
Tennessee																	
UAPSP Giles County	2	2A	1	22		1.34	1.41	.86	1.96	1.63	.29	.67	1.4	2.8	6.1	.189*	.085
Virginia																	
MAP3a/PCN Virginia	2	2A	2	14		1.88	1.82	.89	2.49	1.78	.46	.74	2.3	3.9	6.0	.152	.183
West Virginia																	
NADP Parsons	2	2A	1	12		2.14	2.34	.52	2.59	1.03	.75	1.75	2.8	3.1	4.2	.161	.240
UAPSP Lewisburg	2	2A	2	14		.95	1.07	.74	1.38	1.04	.34	.59	0.9	2.7	3.5	.228*	.176
New Brunswick																	
CANSAP Acadia Fes	3	3	1	3		.67	.54	.44	.58	.25	.35	.35	0.5	0.8	0.8	.239	.184
Charlo	3	3	3	3		3.12	2.55	.52	2.79	1.47	1.60	1.60	2.3	4.4	4.4	.285	.231
St. John	3	3	1	3		2.78	2.65	.88	3.44	3.01	1.20	1.20	2.3	6.9	6.9	.319	.237
Newfoundland																	
CANSAP Gander	3	3	3	3		.31	.19	1.35	.31	.29	.04	.04	0.3	0.6	0.6	.228	.259
Goose	3	2B	3	3		.17	.09	1.40	.16	.18	.02	.02	0.1	0.4	0.4	.313	.175
Nova Scotia																	
CANSAP Truro	3	3	1	3		.73	.70	.32	.72	.21	.49	.49	0.8	0.9	0.9	.307	.326
APN Kejimikujik (b)	2	2A	1	21	1	1.17	.71	1.61	1.50	1.86	.01	.49	0.9	1.7	8.1	.243*	.201*
Ontario																	
CANSAP Atikokan	3	3	3	2		2.62	2.67	.35	2.75	.94	2.08		2.7		3.4	.260	.260
Kingston	3	3	1	3		5.07	5.64	.37	5.92	2.36	4.34	4.34	4.8	8.6	8.6	.352	.338
Moosonee	3	2B	3	2		1.24	1.30	.29	1.33	.38	1.06		1.3		1.6	.260	.260
Mount Forest (a)	3	3	1	3		3.40	3.61	.38	3.80	1.55	2.84	2.84	3.0	5.6	5.6	.370	.364
Peterborough	3	3	3	2		3.33	2.77	.59	3.01	1.69	1.82		3.0		4.2	.260	.260
Simcoe	3	3	1	3		3.64	4.08	.67	4.80	3.52	2.66	2.66	2.9	8.9	8.9	.374	.364
Quebec																	
CANSAP Chibougamau	3	3	3	3		2.11	2.12	.30	2.19	.69	1.68	1.68	1.9	3.0	3.0	.325	.306
Maniwaki	3	2B	3	2		5.24	5.25	.03	5.25	.15	5.14		5.3		5.4	.260	.260
Nitchequon	3	2B	3	3		.66	.37	1.51	.80	1.11	.13	.13	0.2	2.1	2.1	.378	.352
Quebec City	3	3	1	3		3.40	3.45	.33	3.57	1.15	2.44	2.44	3.5	4.7	4.7	.178	.201
St. Hubert	3	3	1	3		3.94	4.13	.49	4.49	2.34	2.88	2.88	3.4	7.2	7.2	.344	.320

Table 8(a)

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)28-Jun-1985  
Page 1

## Nitrate

State	Network	Site Name	Period Summarized		Overall	Site	Data	%	%	%	%	%	N	N	Wtd	NO3	Total
			First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	N	BDL	Mean	Dep	Precip
			Date	Date								Eff			mg/l	g/m2	cm
Delaware																	
	MAP3s/PCN																
	Lewes		Mar 1 80	Jun 1 80	2	2A	2	100	100	98	88	77	15		1.20	.41	34.0
	UAPSP																
	Indian River		Mar 1 80	Jun 1 80	3	3	1	100	99	98	92	98	23		.90	.31	34.0
Georgia																	
	NADP																
	Georgia Station		Mar 4 80	Jun 3 80	2	2A	1	100	100	100	100	107	12	1	.59	.29	50.0
Illinois																	
	NADP																
	Dixon Springs		Mar 4 80	Jun 3 80	2	2B	1	100	100	86	85	91	11		1.41	.43	30.6
	MAP3s/PCN																
	Illinois		Mar 1 80	Jun 1 80	3	2A	3	100	90	86	63	74	22		1.96	.55	28.0
Indiana																	
	UAPSP																
	Fort Wayne		Mar 1 80	Jun 1 80	2	2A	2	100	96	92	79	88	27		2.01	.52	26.0
	Rockport		Mar 1 80	Jun 1 80	3	3	1	100	100	100	100	99	30		1.38	.40	28.9
Massachusetts																	
	UAPSP																
	Montague		Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	96	18		1.59	.50	31.4
Michigan																	
	NADP																
	Wellston		Mar 4 80	Jun 3 80	2	2A	2	92	86	77	82	97	9		2.29	.36	15.9
Minnesota																	
	NADP																
	Lamberton		Mar 4 80	Jun 3 80	2	1	2	92	100	85	91	96	10		1.63	.28	17.2
New Hampshire																	
	NADP																
	Hubbard Brook		Mar 4 80	Jun 3 80	1	1	1	100	100	92	92	98	12		1.57	.49	31.1
New York																	
	NADP																
	Aurora		Mar 4 80	Jun 3 80	2	2A	2	92	100	92	100	94	12		2.40	.56	23.5
	Huntington		Mar 4 80	Jun 3 80	2	2B	2	92	100	92	100	149	12		1.81	.48	26.8
	Jasper		Mar 4 80	Jun 3 80	2	2A	1	100	99	85	85	91	11		1.96	.46	23.3
	Knobit		Feb 26 80	Jun 3 80	2	2A	1	100	92	86	92	89	12		1.89	.44	23.1
	Stillwell Lake		Mar 4 80	Jun 3 80	2	2B	1	100	100	100	100	87	13		1.13	.57	50.0
	MAP3s/PCN																
	Brookhaven		Mar 1 80	Jun 1 80	2	2B	1	100	99	97	88	93	21		1.35	.46	33.9
	Ithaca		Mar 1 80	Jun 1 80	2	2A	1	99	100	98	94	95	17		1.71	.50	29.0
	Whiteface		Mar 1 80	Jun 1 80	1	1	1	99	100	99	100	124	15		2.01	.41	20.5
North Carolina																	
	NADP																
	Clinton Station		Mar 4 80	Jun 3 80	3	2A	3	100	100	69	69	95	9		.59	.18	29.7
	Piedmont Station		Mar 4 80	Jun 3 80	2	2A	2	92	100	85	92	97	11		1.21	.42	34.6
	UAPSP																
	Raleigh		Mar 1 80	Jun 1 80	3	3	2	100	99	98	90	76	18		.75	.22	29.1



Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 2

Nitrate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	NO3	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col Eff	N	BDL	Mean mg/l	Dep g/m2	Precip cm
Ohio															
NADP															
Caldwell	Mar 4 80	Jun 3 80	2	2B	1	100	91	85	85	107	11		1.61	.52	32.4
Wooster	Mar 4 80	Jun 3 80	3	3	2	92	91	77	83	99	10		1.74	.45	25.8
MAP3a/PCN															
Oxford	Mar 1 80	Jun 1 80	2	2B	2	100	91	93	77	103	20		1.86	.60	32.4
UAPSP															
Zanesville	Mar 1 80	Jun 1 80	3	3	2	100	100	99	97	78	29		1.66	.69	41.5
Pennsylvania															
NADP															
Kane	Mar 4 80	Jun 3 80	2	2A	1	100	100	100	100	97	13	1	1.95	.74	38.2
Leading Ridge	Mar 4 80	Jun 3 80	2	1	2	92	100	92	100	92	12		1.96	.73	37.4
MAP3a/PCN															
Penn State	Mar 1 80	Jun 1 80	2	2B	1	100	100	100	100	137	19		1.74	.60	34.7
UAPSP															
Scranton	Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	98	24		1.57	.40	25.8
South Carolina															
NADP															
Clemson	Mar 4 80	Jun 3 80	3	3	2	92	100	85	91	101	10		.79	.44	56.0
Tennessee															
UAPSP															
Giles County	Mar 1 80	Jun 1 80	2	2A	1	100	99	97	88	84	22		.73	.48	65.7
Virginia															
MAP3a/PCN															
Virginia	Mar 1 80	Jun 1 80	2	2A	1	98	96	95	86	96	18		1.55	.47	30.3
West Virginia															
NADP															
Parsons	Mar 4 80	Jun 3 80	2	2A	2	92	100	92	100	92	12		2.11	.80	38.0
UAPSP															
Lewisburg	Mar 1 80	Jun 1 80	2	2A	1	100	100	100	100	102	20		.94	.20	20.8
New Brunswick															
CANSAP															
Acadia Fes	Feb 29 80	May 31 80	3	3	1	100	100	100	100	91	3		1.21	.32	26.5
Charlo	Feb 29 80	May 31 80	3	3	2	100	100	100	100	67	3		.66	.26	38.9
St. John	Feb 29 80	May 31 80	3	3	2	100	100	100	100	77	3		.92	.30	33.0
Newfoundland															
CANSAP															
Goose	Feb 29 80	May 31 80	2	2B	2	100	100	100	100	75	3	1	.33	.06	18.8
Stephenville	Feb 29 80	May 31 80	3	3	3	100	66	66	67	90	2		.04	.01	19.4
Nova Scotia															
CANSAP															
Kejimikujik (a)	Feb 29 80	Jun 2 80	2	2A	1	100	100	100	100	126	3		.87	.23	26.9
Truro	Feb 29 80	May 31 80	3	3	1	100	100	100	100	89	3		.89	.27	30.3
APN															
Kejimikujik (b)	Mar 1 80	Jun 1 80	2	2A	1	99	82	96	85	102	17	1	.89	.29	32.3

1  
63  
1

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 3

Nitrate

State Network Site Name	Period Summarized			Overall	Site Data		% PCL	% TP	% VSL	% VSNP	% Col Eff	N	N BDL	Wtd Mean mg/l	NO3 Dep g/m2	Total Precip cm
	First Date	Last Date	Rating	Rep	Comp											
<b>Ontario</b>																
CANSAP																
Dorset (a)	Feb 29 80	May 31 80	2	1	2	100	100	100	100	72	3			2.78	.74	26.6
ELA (a)	Feb 29 80	May 31 80	2	2A	2	100	100	100	100	74	3			2.09	.11	5.1
Harrow	Feb 29 80	Jun 1 80	3	3	2	100	100	100	100	68	3			3.27	.88	27.1
Kingston	Feb 29 80	May 31 80	3	3	2	100	100	100	100	78	3			3.40	1.11	32.5
Mount Forest (a)	Mar 3 80	Jun 1 80	3	3	3	100	74	66	67	66	2			2.82	.71	25.1
Peterborough	Feb 29 80	May 31 80	3	3	2	100	97	96	75	68	3			3.39	.81	23.8
Pickle Lake	Feb 29 80	Jun 1 80	3	2A	3	100	78	67	67	58	2			2.33	.17	7.3
Simcoe	Feb 29 80	May 31 80	3	3	1	100	100	100	100	91	3			2.88	.76	26.3
APN																
Chalk River	Mar 1 80	Jun 1 80	3	2A	3	100	93	87	69	97	27			2.47	.54	22.1
ELA (b)	Mar 1 80	Jun 1 80	3	2A	3	100	86	95	62	83	8			2.20	.12	5.6
Long Point	Mar 1 80	Jun 1 80	3	3	1	100	90	95	86	93	30			3.62	.96	26.6
<b>Quebec</b>																
CANSAP																
Chibougamau	Feb 29 80	May 30 80	3	3	3	100	100	100	100	60	3			1.34	.20	14.6
Maniwaki	Feb 29 80	May 31 80	2	2B	1	100	100	100	100	86	3			2.68	.58	21.4
Nitchequon	Feb 29 80	May 31 80	3	2B	3	100	100	100	100	52	3	1		.12	.02	14.9
Quebec City	Feb 29 80	May 31 80	3	3	1	100	100	100	100	88	3			2.14	.59	27.8
Sept Isles	Feb 29 80	May 31 80	3	3	2	100	100	100	100	62	3			.67	.22	33.1
St. Hubert	Feb 29 80	May 31 80	3	3	3	100	69	66	67	77	2			2.45	.56	22.8

Table 8(b)

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)28-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	Concentration											K-S		
				N	N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Lewes	2	2A	2	15		1.20	1.14	.89	1.61	1.39	.25	.55	1.3	2.5	5.5	.165	.149
UAPSP																	
Indian River	3	3	1	23		.90	1.02	.94	1.47	1.23	.14	.63	1.0	2.1	4.7	.233*	.114
Georgia																	
NADP																	
Georgia Station	2	2A	1	12	1	.59	.56	1.38	.87	.68	.02	.48	0.7	1.1	2.6	.247*	.297*
Illinois																	
NADP																	
Dixon Springs	2	2B	1	11		1.41	1.50	.52	1.73	1.16	.65	1.11	1.3	2.0	5.0	.309*	.192
MAP3s/PCN																	
Illinois	3	2A	3	22		1.96	2.00	.62	2.40	1.63	.62	1.24	2.2	3.2	8.1	.137	.095
Indiana																	
UAPSP																	
Fort Wayne	2	2A	2	27		2.01	2.22	.60	2.63	1.63	.83	1.41	2.3	3.2	7.1	.155	.081
Rockport	3	3	1	30		1.38	1.51	.59	1.80	1.19	.47	1.02	1.5	2.2	5.6	.157	.096
Massachusetts																	
UAPSP																	
Montague	2	2A	1	18		1.59	1.80	1.22	3.49	4.56	.25	.56	1.7	5.3	18.9	.262*	.112
Michigan																	
NADP																	
Wellston	2	2A	2	9		2.29	1.91	.62	2.26	1.38	.84	1.13	1.6	3.4	4.8	.226	.151
Minnesota																	
NADP																	
Lamberton	2	1	2	10		1.63	1.91	.44	2.09	.97	.98	1.33	2.0	2.6	4.3	.200	.142
New Hampshire																	
NADP																	
Hubbard Brook	1	1	1	12		1.57	1.76	.84	2.56	3.06	.38	1.03	2.0	2.6	12.0	.410*	.237
New York																	
NADP																	
Aurora	2	2A	2	12		2.40	2.81	.67	3.47	2.51	.98	1.78	2.4	5.0	9.3	.249*	.165
Huntington	2	2B	2	12		1.81	1.93	.61	2.26	1.23	.74	1.13	2.1	3.7	4.0	.195	.181
Jasper	2	2A	1	11		1.96	2.34	.64	2.86	2.06	1.05	1.28	2.2	3.4	7.1	.230	.158
Knobit	2	2A	1	12		1.89	2.22	1.16	3.99	4.64	.40	.96	2.2	5.2	14.2	.297*	.102
Stillwell Lake	2	2B	1	13		1.13	1.98	1.06	4.15	7.98	.57	.93	1.6	3.5	30.4	.426*	.170
MAP3s/PCN																	
Brookhaven	2	2B	1	21		1.35	1.86	1.14	3.46	4.32	.25	.81	2.0	4.0	16.1	.284*	.150
Ithaca	2	2A	1	17		1.71	2.19	.83	3.02	2.69	.55	1.05	2.5	2.9	9.9	.330*	.178
Whiteface	1	1	1	15		2.01	1.78	.75	2.20	1.32	.31	1.12	2.2	2.9	4.8	.145	.204
North Carolina																	
NADP																	
Clinton Station	3	2A	3	9		.59	.84	.79	1.09	.86	.24	.44	1.1	1.3	3.1	.288*	.178
Piedmont Station	2	2A	2	11		1.21	1.67	.87	2.36	2.29	.36	1.02	1.4	2.8	8.2	.262*	.147
UAPSP																	
Raleigh	3	3	2	18		.75	1.12	.84	1.59	1.58	.30	.66	1.1	2.1	6.6	.234*	.120

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 2

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	50% mg/l	75%	Max	D-Statistic Gau	Log
Ohio																	
NADP																	
Caldwell	2	2B	1	11		1.61	2.00	.62	2.43	1.72	.99	1.22	1.5	3.9	6.1	.273*	.206
Wooster	3	3	2	10		1.74	2.09	.73	2.63	1.91	.61	1.30	2.0	3.6	6.8	.208	.104
MAP3s/PCN																	
Oxford	2	2B	2	20		1.86	1.96	.63	2.44	1.89	.87	1.30	1.8	2.6	6.8	.294*	.192*
UAPSP																	
Zanesville	3	3	2	29		1.66	1.75	.65	2.23	2.06	.66	1.02	1.6	2.7	11.1	.224*	.081
Pennsylvania																	
NADP																	
Kane	2	2A	1	13	1	1.95	1.68	1.30	2.55	1.97	.07	1.23	2.4	3.2	7.9	.206	.258*
Leading Ridge	2	1	2	12		1.96	2.30	.59	2.69	1.65	.94	1.42	2.4	3.4	6.7	.160	.105
MAP3s/PCN																	
Penn State	2	2B	1	19		1.74	1.85	.53	2.10	1.08	.62	1.18	1.7	2.7	4.3	.190	.113
UAPSP																	
Scranton	2	2A	1	24		1.57	2.00	.75	2.70	2.59	.59	1.28	1.8	2.9	10.9	.258*	.150
South Carolina																	
NADP																	
Clemson	3	3	2	10		.79	.98	.66	1.24	1.10	.56	.58	0.8	1.5	4.1	.271*	.197
Tennessee																	
UAPSP																	
Giles County	2	2A	1	22		.73	.79	.81	1.08	.96	.16	.47	0.7	1.3	3.5	.226*	.114
Virginia																	
MAP3s/PCN																	
Virginia	2	2A	1	18		1.55	1.70	.85	2.33	1.94	.35	.85	1.9	3.1	6.8	.251*	.139
West Virginia																	
NADP																	
Parsons	2	2A	2	12		2.11	2.10	.63	2.54	1.83	.88	1.20	2.0	3.6	7.2	.286*	.170
UAPSP																	
Lewisburg	2	2A	1	20		.94	1.05	.81	1.46	1.33	.29	.49	1.0	2.0	5.0	.221*	.101
New Brunswick																	
CANSAP																	
Acadia Fes	3	3	1	3		1.21	1.36	.58	1.52	.92	.84	.84	1.2	2.6	2.6	.322	.278
Charlo	3	3	2	3		.66	.67	.57	.74	.36	.35	.35	0.8	1.1	1.1	.232	.287
St. John	3	3	2	3		.92	.98	.32	1.02	.35	.80	.80	0.8	1.4	1.4	.362	.354
Newfoundland																	
CANSAP																	
Goose	2	2B	2	3	1	.33	.14	2.93	.56	.66	.01	.01	0.4	1.3	1.3	.267	.297
Stephenville	3	3	3	2		.04	.04	.00	.04	.00	.04		0.0		0.0		
Nova Scotia																	
CANSAP																	
Kejinkujik (a)	2	2A	1	3		.87	.98	.69	1.17	.87	.62	.62	0.7	2.2	2.2	.367	.350
Truro	3	3	1	3		.89	.90	.29	.93	.27	.67	.67	0.9	1.2	1.2	.175	.204
APN																	
Kejinkujik (b)	2	2A	1	17	1	.89	.70	1.79	1.71	2.12	.01	.33	0.9	2.4	8.5	.223*	.156

Spring Quarter 1980 Unified Data Summary  
(Mar 1980, Apr 1980, May 1980)

28-Jun-1985  
Page 3

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Concentration						K-S		
									Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles 50% mg/l	75%	Max	D-Statistic Gau	Log
Ontario																	
CANSAP																	
Dorset (a)	2	1	2	3		2.78	2.88	.20	2.92	.62	2.48	2.48	2.7	3.6	3.6	.333	.322
ELA (a)	2	2A	2	3		2.09	1.66	.59	1.83	.86	.84	.84	2.2	2.4	2.4	.338	.356
Harrow	3	3	2	3		3.27	3.28	.37	3.43	1.26	2.30	2.30	3.2	4.8	4.8	.241	.196
Kingston	3	3	2	3		3.40	3.48	.21	3.53	.69	2.75	2.75	3.8	4.0	4.0	.325	.335
Mount Forest (a)	3	3	3	2		2.82	2.81	.20	2.84	.56	2.44		2.8		3.2	.260	.260
Peterborough	3	3	2	3		3.39	4.29	.82	5.48	4.85	2.48	2.48	2.9	11.1	11.1	.371	.353
Pickle Lake	3	2A	3	2		2.33	1.83	.50	1.95	.94	1.29		1.9		2.6	.260	.260
Simcoe	3	3	1	3		2.88	2.88	.14	2.89	.40	2.48	2.48	2.9	3.3	3.3	.196	.214
APN																	
Chalk River	3	2A	3	27		2.47	2.45	.83	3.36	2.80	.58	1.15	2.5	4.7	11.2	.160	.082
ELA (b)	3	2A	3	8		2.20	.95	1.55	1.89	1.79	.04	.42	1.1	3.6	4.7	.267	.190
Long Point	3	3	1	30		3.62	3.67	.68	4.47	2.76	.93	2.50	4.3	5.5	13.1	.135	.141
Quebec																	
CANSAP																	
Chibougamau	3	3	3	3		1.34	1.33	.07	1.33	.09	1.24	1.24	1.3	1.4	1.4	.175	.178
Maniwaki	2	2B	1	3		2.68	2.63	.14	2.64	.38	2.30	2.30	2.6	3.1	3.1	.244	.227
Nitchequon	3	2B	3	3	1	.12	.04	2.55	.15	.22	.00	.00	0.0	0.4	0.4	.353	.175
Quebec City	3	3	1	3		2.14	2.00	.46	2.14	.97	1.29	1.29	1.9	3.2	3.2	.245	.189
Sept Isles	3	3	2	3		.67	.65	.27	.66	.18	.49	.49	0.7	0.8	0.8	.175	.204
St. Hubert	3	3	3	2		2.45	2.46	.01	2.46	.03	2.44		2.5		2.5	.260	.260

Table 9(a)

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 1

## Nitrate

State	Network	Period Summarized				Overall	Site	Data	%	%	%	%	%	%	%	Wtd	NO3	Total	
	Site Name	First	Date	Last	Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	Eff	N	N	Dep	Precip	
																BDL	g/m2	cm	
Delaware	MAP3s/PCN																		
	Leves	Jun	1	80	Sep 1 80	2	2A	2	100	99	95	75	84	15			1.93	.40	20.7
Illinois	NADP																		
	Argonne	Jun	3	80	Sep 2 80	3	3	1	100	100	100	100	97	13			2.33	.88	38.0
	Bondville	Jun	3	80	Sep 2 80	2	2A	2	92	100	85	92	97	11			2.22	.61	27.3
	Dixon Springs	Jun	3	80	Sep 2 80	3	2B	3	92	100	69	75	90	9			1.75	.42	23.9
	Salem	Jun	3	80	Sep 2 80	1	1	1	100	99	85	85	94	11			1.90	.46	24.4
	MAP3s/PCN																		
	Illinois	Jun	1	80	Sep 1 80	3	2A	3	100	98	89	69	58	22			1.66	.72	43.6
Indiana	UAFSP																		
	Fort Wayne	Jun	1	80	Sep 1 80	2	2A	1	100	99	95	83	99	25			1.71	.59	34.4
	Rockport	Jun	1	80	Sep 1 80	3	3	1	100	100	100	100	100	21			1.25	.40	32.2
Maine	NADP																		
	Caribou	Jun	3	80	Sep 3 80	3	2B	3	93	83	68	82	101	9			1.04	.25	24.3
Michigan	NADP																		
	Douglas Lake	Jun	3	80	Sep 2 80	2	1	2	92	100	92	100	103	12			2.43	.32	13.1
	Wellston	Jun	3	80	Sep 2 80	3	2A	3	92	73	69	75	99	9			2.29	.65	28.2
Minnesota	NADP																		
	Lamberton	Jun	3	80	Sep 2 80	2	1	2	92	100	92	100	94	12			1.83	.46	24.9
	Marcell	Jun	3	80	Sep 2 80	2	2B	2	92	100	92	100	91	12			1.00	.31	31.2
Nebraska	NADP																		
	Mead	Jun	3	80	Sep 2 80	2	2	2	92	97	85	92	105	11			1.82	.46	25.3
New York	NADP																		
	Aurora	Jun	3	80	Sep 2 80	2	2A	2	92	100	85	92	97	11			2.48	.71	28.5
	Jasper	Jun	3	80	Sep 2 80	2	2A	2	92	100	85	92	102	11			1.96	.38	19.5
	Stilwell Lake	Jun	3	80	Sep 2 80	2	2B	2	92	100	85	91	91	10			2.91	.66	22.5
	MAP3s/PCN																		
	Brookhaven	Jun	1	80	Sep 1 80	2	2B	1	100	99	98	87	98	13			2.62	.42	15.8
	Ithaca	Jun	1	80	Sep 1 80	2	2A	1	100	99	99	95	105	18			2.00	.44	21.9
	Whiteface	Jun	1	80	Sep 1 80	1	1	1	100	97	96	89	114	31	1		1.38	.44	31.8
North Carolina	NADP																		
	Clinton Station	Jun	3	80	Sep 2 80	2	2A	1	100	100	100	100	92	12			1.53	.42	27.4
	Coveeta	Jun	3	80	Sep 2 80	2	2A	1	100	100	92	92	94	12			1.29	.33	25.9
	Lewiston	Jun	3	80	Sep 2 80	2	2A	2	92	100	85	92	97	11			2.38	.25	10.3
	Piedmont Station	Jun	3	80	Sep 2 80	2	2A	2	92	100	77	83	95	10			2.35	.39	16.7
	UAFSP																		
	Raleigh	Jun	1	80	Sep 1 80	3	3	2	100	99	96	79	95	15			1.28	.25	19.7

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Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 2

Nitrate

State	Network	Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	%	N	N	Wtd	NO3	Total
			First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	Eff		BDL	Mean	Dep	Precip
																mg/l	g/m2	cm
Ohio																		
	NADP																	
		Caldwell	Jun 3 80	Sep 2 80	2	2B	1	100	100	100	100	101	13			2.20	.95	43.1
		Delaware	Jun 3 80	Sep 2 80	2	2A	1	100	100	100	100	85	13			2.43	1.22	50.1
		Wooster	Jun 3 80	Sep 2 80	3	3	1	100	100	100	100	92	12			1.95	.84	43.1
	MAP3a/PCN																	
		Oxford	Jun 1 80	Sep 1 80	3	2B	3	100	87	89	67	73	20			2.06	.85	41.2
	UAPSP																	
		Zanesville	Jun 1 80	Sep 1 80	3	3	1	100	100	99	97	105	30			1.65	.88	53.1
Pennsylvania																		
	NADP																	
		Leading Ridge	Jun 3 80	Sep 2 80	2	1	2	92	100	92	100	96	12			2.35	.56	23.6
	MAP3a/PCN																	
		Penn State	Jun 1 80	Sep 1 80	2	2B	1	100	100	100	100	113	24			2.36	.60	25.4
	UAPSP																	
		Scranton	Jun 1 80	Sep 1 80	2	2A	1	100	100	100	100	106	26			1.96	.29	14.8
Virginia																		
	MAP3a/PCN																	
		Virginia	Jun 1 80	Sep 1 80	3	2A	3	100	64	92	68	98	15			2.01	.46	23.0
West Virginia																		
	NADP																	
		Parsons	Jun 3 80	Sep 2 80	2	2A	1	100	100	100	100	92	13			1.95	.89	45.6
	UAPSP																	
		Lewisburg	Jun 1 80	Sep 1 80	2	2A	1	100	100	99	96	103	26			1.47	.40	27.4
Wisconsin																		
	NADP																	
		Spooner	Jun 1 80	Sep 2 80	2	1	2	98	75	83	85	86	11			1.98	.64	32.1
		Trout Lake	Jun 3 80	Sep 2 80	1	1	1	100	100	100	100	94	13			1.26	.47	37.2
New Brunswick																		
	CANSAP																	
		Acadia Fes	May 31 80	Aug 31 80	3	3	1	100	100	100	100	96	3			1.08	.37	34.3
		Charlo	May 31 80	Aug 30 80	3	3	1	100	100	100	100	83	3			.62	.25	40.3
		St. John	May 31 80	Aug 31 80	3	3	1	100	100	100	100	81	3			1.64	.59	35.9
Newfoundland																		
	CANSAP																	
		Goose	May 31 80	Aug 31 80	2	2B	1	100	100	100	100	83	3	1		.15	.05	35.1
Nova Scotia																		
	CANSAP																	
		Kejimikujik (a)	Jun 2 80	Aug 31 80	2	2A	2	100	100	100	100	76	3			1.13	.21	18.3
		Shelburne	May 31 80	Aug 31 80	2	2A	1	100	100	100	100	91	3			1.87	.38	20.5
		Truro	May 31 80	Sep 1 80	3	3	2	100	100	100	100	79	3			1.53	.33	21.8
APN																		
		Kejimikujik (b)	Jun 1 80	Sep 1 80	2	2A	2	99	95	92	70	98	14	1		1.07	.20	18.5

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 3

Nitrate

State Network Site Name	Period Summarized		Overall	Site Data	%	%	%	%	%	N	N	Wtd	NO3	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col	BDL	Mean	Dep	Precip
	Date	Date								Eff		mg/l	g/m2	cm
<hr/>														
Ontario														
CANSAP														
Atikokan	May 31 80	Aug 31 80	3	3	1	100	100	100	100	91	3	.96	.28	28.7
Dorset (a)	May 31 80	Sep 1 80	3	1	3	100	73	66	67	93	2	1.74	.73	42.2
Harrow	Jun 1 80	Sep 2 80	3	3	1	100	100	100	100	95	3	2.16	.97	44.9
Kingston	May 31 80	Aug 30 80	3	3	1	100	100	100	100	90	3	2.71	.68	24.9
Mount Forest (a)	Jun 1 80	Sep 1 80	3	3	1	100	100	100	100	84	3	4.32	1.08	25.0
Simcoe	May 31 80	Aug 31 80	3	3	1	100	100	100	100	90	3	2.66	.63	23.5
APN														
Chalk River	Jun 1 80	Sep 1 80	2	2A	2	100	94	87	71	96	30	1.63	.56	34.0
Long Point	Jun 1 80	Sep 1 80	3	3	2	100	97	92	75	97	21	2.44	.74	30.2
APIOS-C														
Bear Island	May 29 80	Sep 2 80	2	2A	1	100	100	100	100	87	3	1.38	.34	25.0
Dorset (c)	May 31 80	Sep 2 80	1	1	1	100	100	100	100	87	3	1.94	.79	40.4
Killarney	May 28 80	Sep 2 80	3	2A	3	100	67	62	67	90	2	2.78	.64	23.1
Ramsey	May 29 80	Sep 2 80	2	2A	2	96	100	96	100	79	3	1.06	.21	19.6
Quebec														
CANSAP														
Chibougamau	May 30 80	Aug 31 80	3	3	1	100	100	100	100	85	3	.38	.14	36.5
Fort Chimo	May 31 80	Aug 31 80	2	2B	2	100	100	100	100	63	3	.24	.03	10.9
Maniwaki	May 31 80	Sep 1 80	2	2B	1	100	100	100	100	90	3	1.51	.53	35.0
Nitchequon	May 31 80	Aug 31 80	2	2B	1	100	100	100	100	92	3	.06	.02	35.9
Quebec City	May 31 80	Aug 31 80	3	3	1	100	100	100	100	86	3	1.58	.50	31.8
St. Hubert	May 31 80	Aug 31 80	3	3	1	100	100	100	100	84	3	1.82	.55	30.5



Table 9(b)

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	Concentration											K-S	
					N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	50% mg/l	75%	Max	D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Lewes	2	2A	2	15		1.93	2.43	.64	2.96	2.14	.87	1.43	2.4	3.9	9.3	.185	.116
Illinois																	
NADP																	
Argonne	3	3	1	13		2.33	2.55	.35	2.70	.98	1.37	2.01	2.5	3.2	5.0	.184	.149
Bondville	2	2A	2	11		2.22	3.07	.64	3.89	3.68	1.72	1.94	2.5	4.0	14.4	.303*	.182
Dixon Springs	3	2B	3	9		1.75	1.96	.41	2.13	1.01	1.16	1.46	1.8	2.7	4.3	.263	.204
Salem	1	1	1	11		1.90	2.41	.55	2.78	1.71	1.01	1.60	2.1	3.8	7.0	.265*	.195
MAP3s/PCN																	
Illinois	3	2A	3	22		1.66	1.83	.63	2.17	1.29	.41	1.41	1.7	2.8	4.7	.183	.139
Indiana																	
UAPSP																	
Fort Wayne	2	2A	1	25		1.71	1.97	.68	2.41	1.62	.27	1.37	1.8	3.2	7.2	.191*	.087
Rockport	3	3	1	21		1.25	1.76	.77	2.48	3.07	.36	1.11	1.8	2.8	15.3	.337*	.152
Maine																	
NADP																	
Caribou	3	2B	3	9		1.04	1.21	.61	1.49	1.27	.65	.76	1.1	1.6	4.7	.289*	.174
Michigan																	
NADP																	
Douglas Lake	2	1	2	12		2.43	3.04	.96	4.52	4.67	.36	2.10	2.6	4.5	17.1	.321*	.218
Wellston	3	2A	3	9		2.29	2.63	.48	2.97	1.94	1.63	1.86	2.3	3.2	7.9	.281*	.180
Minnesota																	
NADP																	
Lamberton	2	1	2	12		1.83	2.35	.67	3.06	3.09	1.10	1.34	2.2	2.9	12.4	.339*	.198
Marcell	2	2B	2	12		1.00	1.50	.57	1.73	1.02	.50	.97	1.7	2.1	4.4	.167	.137
Nebraska																	
NADP																	
Mead	2	2	2	11		1.82	2.01	.78	2.69	2.30	.76	1.09	2.0	3.4	7.5	.216	.148
New York																	
NADP																	
Aurora	2	2A	2	11		2.48	2.60	.52	2.90	1.29	.95	2.32	2.6	3.7	5.3	.158	.230
Jasper	2	2A	2	11		1.96	2.22	.46	2.46	1.26	1.16	1.60	2.0	3.1	5.5	.192	.142
Stilwell Lake	2	2B	2	10		2.91	3.62	.59	4.25	2.70	1.43	2.34	3.5	6.1	10.4	.244	.141
MAP3s/PCN																	
Brookhaven	2	2B	1	13		2.62	2.50	.90	3.43	2.78	.29	1.74	2.3	4.9	10.5	.230	.169
Ithaca	2	2A	1	18		2.00	1.99	.55	2.35	1.62	1.12	1.29	1.6	3.0	6.8	.244*	.230*
Whiteface	1	1	1	31	1	1.38	1.24	1.15	1.86	1.84	.02	.87	1.5	2.4	9.9	.243*	.163*
North Carolina																	
NADP																	
Clinton Station	2	2A	1	12		1.53	2.01	1.17	3.06	2.72	.09	1.46	2.6	3.8	10.5	.270*	.240
Coweeta	2	2A	1	12		1.29	1.55	.37	1.64	.57	.85	1.08	1.8	1.9	2.8	.148	.190
Lewiston	2	2A	2	11		2.38	2.83	.58	3.24	1.71	.76	1.95	3.2	3.7	7.5	.244	.233
Piedmont Station	2	2A	2	10		2.35	3.07	.47	3.35	1.37	1.53	1.75	3.6	4.2	5.7	.170	.227
UAPSP																	
Raleigh	3	3	2	15		1.28	1.76	.68	2.26	2.29	.40	1.26	1.7	2.3	10.3	.385*	.227*

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 2

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
Ohio																	
NADP																	
Caldwell	2	2B	1	13		2.20	2.66	.64	3.36	3.20	1.06	1.96	2.8	3.0	13.6	.388*	.267*
Delaware	2	2A	1	13		2.43	2.46	.20	2.51	.52	1.79	2.08	2.3	2.9	3.4	.202	.177
Wooster	3	3	1	12		1.95	2.35	.44	2.56	1.07	1.00	1.68	2.5	3.3	4.5	.147	.133
MAP3s/PCN																	
Oxford	3	2B	3	20		2.06	2.20	.46	2.44	1.14	1.05	1.47	2.0	3.3	5.0	.194*	.143
UAPSP																	
Zanesville	3	3	1	30		1.65	1.72	.57	1.96	.92	.29	1.27	1.8	2.6	4.4	.077	.126
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	12		2.35	2.96	.42	3.22	1.49	1.75	2.02	3.0	4.0	7.0	.163	.148
MAP3s/PCN																	
Penn State	2	2B	1	24		2.36	2.56	.55	2.98	1.89	.81	1.74	2.6	3.7	9.9	.187*	.097
UAPSP																	
Scranton	2	2A	1	26		1.96	2.30	.49	2.58	1.29	1.02	1.60	2.1	3.6	5.8	.162	.099
Virginia																	
MAP3s/PCN																	
Virginia	3	2A	3	15		2.01	2.23	.62	2.79	2.34	.99	1.43	1.9	2.5	9.3	.341*	.223*
West Virginia																	
NADP																	
Parsons	2	2A	1	13		1.95	2.44	.53	2.79	1.60	1.06	1.57	2.3	3.5	6.5	.213	.114
UAPSP																	
Lewisburg	2	2A	1	26		1.47	1.61	.46	1.79	.89	.62	1.17	1.6	2.0	4.4	.210*	.129
Wisconsin																	
NADP																	
Spooner	2	1	2	11		1.98	1.96	.37	2.08	.75	1.18	1.38	2.1	2.7	3.4	.161	.138
Trout Lake	1	1	1	13		1.26	1.24	.41	1.33	.52	.60	.86	1.3	1.9	2.1	.143	.134
New Brunswick																	
CANSAP																	
Acadia Fes	3	3	1	3		1.08	1.00	.44	1.06	.42	.62	.62	1.1	1.5	1.5	.211	.259
Charlo	3	3	1	3		.62	.65	.67	.76	.55	.40	.40	0.5	1.4	1.4	.357	.331
St. John	3	3	1	3		1.64	1.59	.14	1.60	.23	1.46	1.46	1.5	1.9	1.9	.382	.381
Newfoundland																	
CANSAP																	
Goose	2	2B	1	3	1	.15	.05	2.16	.14	.18	.01	.01	0.1	0.4	0.4	.318	.202
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	2	2A	2	3		1.13	1.19	.33	1.23	.37	.82	.82	1.3	1.6	1.6	.267	.295
Shelburne	2	2A	1	3		1.87	2.13	.74	2.52	1.65	.97	.97	2.3	4.3	4.3	.209	.218
Truro	3	3	2	3		1.53	1.46	.21	1.48	.30	1.15	1.15	1.6	1.7	1.7	.277	.294
APN																	
Kejimikujik (b)	2	2A	2	14	1	1.07	.75	1.63	1.33	1.07	.01	.53	1.1	1.8	3.5	.200	.241*

Summer Quarter 1980 Unified Data Summary  
(Jun 1980, Jul 1980, Aug 1980)

28-Jun-1985  
Page 3

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	50% mg/l	75%	Max	D-Statistic Gau	Log
Ontario																	
CANSAP																	
Atikokan	3	3	1	3		.96	.96	.12	.96	.11	.84	.84	1.0	1.1	1.1	.221	.235
Dorset (a)	3	1	3	2		1.74	1.65	.68	1.84	1.16	1.02		1.8		2.7	.260	.260
Harrow	3	3	1	3		2.16	2.20	.26	2.24	.59	1.73	1.73	2.1	2.9	2.9	.247	.216
Kingston	3	3	1	3		2.71	2.81	.41	2.97	1.18	1.86	1.86	2.8	4.2	4.2	.212	.177
Mount Forest (a)	3	3	1	3		4.32	4.44	.41	4.71	2.07	3.28	3.28	3.8	7.1	7.1	.342	.322
Simcoe	3	3	1	3		2.66	2.65	.17	2.67	.44	2.17	2.17	2.9	3.0	3.0	.349	.354
APN																	
Chalk River	2	2A	2	30		1.63	1.53	.76	2.03	1.59	.40	.87	1.4	2.9	5.7	.240*	.125
Long Point	3	3	2	21		2.44	2.46	.42	2.67	1.04	1.01	1.97	2.6	3.3	5.0	.096	.101
APIOS-C																	
Bear Island	2	2A	1	3		1.38	1.36	.37	1.42	.47	.89	.89	1.6	1.8	1.8	.314	.333
Dorset (c)	1	1	1	3		1.94	1.94	.46	2.07	.82	1.15	1.15	2.3	2.7	2.7	.280	.313
Killarney	3	2A	3	2		2.78	2.70	.17	2.72	.47	2.39		2.7		3.1	.260	.260
Ramsey	2	2A	2	3		1.06	1.06	.40	1.12	.49	.80	.80	0.9	1.7	1.7	.353	.338
Quebec																	
CANSAP																	
Chibougamau	3	3	1	3		.38	.33	.86	.41	.31	.13	.13	0.4	0.7	0.7	.239	.203
Fort Chimo	2	2B	2	3	1	.24	.09	2.50	.26	.25	.01	.01	0.3	0.5	0.5	.178	.330
Maniwaki	2	2B	1	3		1.51	1.50	.21	1.52	.34	1.29	1.29	1.4	1.9	1.9	.337	.327
Nitchequon	2	2B	1	3	1	.06	.03	1.67	.06	.07	.01	.01	0.0	0.1	0.1	.280	.206
Quebec City	3	3	1	3		1.58	1.58	.18	1.60	.29	1.33	1.33	1.6	1.9	1.9	.227	.204
St. Hubert	3	3	1	3		1.82	2.09	.54	2.30	1.27	1.29	1.29	1.9	3.7	3.7	.290	.235

Table 10(a)

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	NO3	Total
	First	Last	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col Eff		BDL	Mean mg/l	Dep g/m2	Precip cm
Delaware															
MAP3a/PCN															
Lewes	Sep 1 80	Dec 1 80	2	2A	1	100	100	99	94	112	17		1.11	.24	21.7
Indiana															
NADP															
Indiana Dunes	Sep 2 80	Dec 2 80	3	3	1	100	100	85	85	99	11		2.58	.38	14.6
UAPSP															
Fort Wayne	Sep 1 80	Dec 1 80	2	2A	1	100	99	97	88	95	22		1.71	.25	14.5
Rockport	Sep 1 80	Dec 1 80	3	3	2	100	100	99	92	75	12		.72	.16	22.0
Massachusetts															
UAPSP															
Turners Falls	Sep 1 80	Dec 1 80	2	2A	1	100	100	100	100	98	18		1.55	.28	18.4
Michigan															
NADP															
Douglas Lake	Sep 2 80	Dec 2 80	2	1	2	92	100	92	100	95	12	1	1.90	.23	12.1
Kellogg	Sep 2 80	Dec 2 80	2	2A	2	92	100	92	100	98	12		2.35	.36	15.3
Wellston	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	96	13		1.51	.37	24.3
New Hampshire															
NADP															
Hubbard Brook	Sep 2 80	Dec 2 80	2	1	2	92	100	92	100	100	11		1.89	.55	28.9
New York															
NADP															
Aurora	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	93	13		2.32	.50	21.6
Chautauqua	Sep 2 80	Dec 2 80	2	2A	1	100	90	85	85	97	11		1.86	.65	34.9
Huntington	Sep 2 80	Dec 2 80	2	2B	2	92	91	85	92	103	11		1.86	.41	22.0
Jasper	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	96	13		1.20	.18	14.8
Stillwell Lake	Sep 2 80	Dec 2 80	2	2B	2	92	100	85	92	88	11		1.33	.34	25.6
MAP3a/PCN															
Brookhaven	Sep 1 80	Dec 1 80	2	2B	1	99	97	97	87	83	13		.87	.18	21.0
Ithaca	Sep 1 80	Dec 1 80	2	2A	1	100	92	96	83	97	19		1.70	.46	26.8
Whiteface	Sep 1 80	Dec 1 80	1	1	1	100	100	99	96	105	25		1.51	.49	32.5
North Carolina															
NADP															
Clinton Station	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	94	12		.88	.28	31.7
Coweeta	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	92	11		.82	.28	34.3
Finley (A)	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	98	12		1.41	.33	23.7
Lewiston	Sep 2 80	Dec 2 80	2	2A	1	100	100	92	92	96	12	1	.91	.21	23.4
Piedmont Station	Sep 2 80	Dec 2 80	2	2A	1	100	100	85	85	92	11		1.38	.44	31.7
UAPSP															
Raleigh	Sep 1 80	Dec 1 80	3	3	1	100	99	98	91	94	21		1.25	.30	23.7
Ohio															
NADP															
Caldwell	Sep 2 80	Dec 2 80	2	2B	2	92	100	92	100	99	11		1.65	.22	13.6
Delaware	Sep 2 80	Dec 2 80	2	2A	1	100	100	85	85	92	11		1.89	.30	15.7
Wooster	Sep 2 80	Dec 2 80	3	3	2	92	100	85	92	94	11		1.75	.22	12.7
UAPSP															
Zanesville	Sep 1 80	Dec 1 80	3	3	2	100	98	99	95	76	21		1.62	.37	23.0

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 2

Nitrate

State	Network	Site Name	Period Summarized		Overall	Site Data		%	%	%	%	%	N	N	Wtd	NO3	Total
			First Date	Last Date	Rating	Rep	Comp	PCL	TP	VSL	VSMP	Col Eff		BDL	Mean mg/l	Dep g/m2	Precip cm
Pennsylvania	NADP																
		Leading Ridge	Sep 2 80	Dec 2 80	2	1	2	92	100	92	100	91	12		1.63	.36	22.1
		MAP3a/PCN															
		Penn State	Sep 1 80	Dec 1 80	2	2B	1	100	100	99	94	102	15		1.55	.27	17.7
		UAPSP															
		Scranton	Sep 1 80	Dec 1 80	2	2A	1	100	100	100	100	100	20		1.30	.23	17.6
South Carolina	NADP																
		Clemson	Sep 2 80	Dec 2 80	3	3	1	100	100	85	85	98	11		.77	.26	33.4
Tennessee	NADP																
		Walker Branch	Sep 2 80	Dec 2 80	2	2A	2	92	100	85	92	105	11		1.27	.24	19.1
West Virginia	NADP																
		Parsons	Sep 2 80	Dec 2 80	2	2A	1	100	100	100	100	95	13		1.66	.39	23.6
		UAPSP															
		Lewisburg	Sep 1 80	Dec 1 80	2	2A	2	100	100	100	100	70	17		.94	.11	11.6
Wisconsin	NADP																
		Trout Lake	Sep 2 80	Dec 2 80	1	1	1	100	100	92	92	93	12		1.62	.38	23.3
New Brunswick	CANSAP																
		Acadia Fes	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	88	3		1.23	.55	44.3
		Charlo	Aug 30 80	Nov 30 80	3	3	1	100	100	100	100	81	3		.69	.22	31.7
		St. John	Aug 31 80	Nov 30 80	3	3	1	100	100	100	100	86	3	1	.77	.35	45.0
Newfoundland	CANSAP																
		Gander	Sep 1 80	Dec 1 80	3	3	2	100	100	100	100	70	3		.27	.10	36.0
		Goose	Aug 31 80	Dec 1 80	2	2B	1	100	100	100	100	86	3	1	.20	.07	36.1
Nova Scotia	CANSAP																
		Kejimikujik (a)	Aug 31 80	Nov 30 80	2	2A	1	100	100	100	100	102	3		.30	.12	39.3
		Shelburne	Aug 31 80	Nov 30 80	2	2A	1	100	100	100	100	95	3		.59	.24	40.4
		Truro	Sep 1 80	Nov 30 80	3	3	2	100	100	100	100	79	3		1.09	.35	32.2

28-Jun-1985  
Page 3

## Page 3

- 75 -

Table 10 (b)

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)28-Jun-1985  
Page 1

## Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	N BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles 50% mg/l	75%	Max	D-Statistic Gau	Log
Delaware																	
MAP3s/PCN																	
Lewes	2	2A	1	17		1.11	1.25	.82	1.65	1.28	.18	.78	1.2	2.5	5.3	.184	.125
Indiana																	
NADP																	
Indiana Dunes	3	3	1	11		2.58	3.33	.53	3.72	1.68	1.04	2.57	3.5	4.6	6.4	.123	.150
UAPSP																	
Fort Wayne	2	2A	1	22		1.71	1.99	.68	2.42	1.46	.57	1.25	2.1	3.4	6.0	.112	.099
Rockport	3	3	2	12		.72	1.06	.84	1.41	1.06	.17	.64	1.1	2.1	4.0	.180	.115
Massachusetts																	
UAPSP																	
Turners Falls	2	2A	1	18		1.55	1.83	1.07	2.85	2.63	.16	1.06	1.8	4.6	9.9	.260*	.112
Michigan																	
NADP																	
Douglas Lake	2	1	2	12	1	1.90	1.36	1.63	2.17	1.14	.02	1.12	2.5	3.0	3.7	.212	.293*
Kellogg	2	2A	2	12		2.35	2.72	.42	2.95	1.27	1.45	2.23	2.6	4.1	5.3	.203	.150
Wellston	2	2A	1	13		1.51	1.56	.57	1.77	.80	.43	1.11	1.9	2.4	3.2	.143	.174
New Hampshire																	
NADP																	
Hubbard Brook	2	1	2	11		1.89	1.67	.77	2.12	1.43	.37	.90	1.7	3.9	4.3	.215	.136
New York																	
NADP																	
Aurora	2	2A	1	13		2.32	2.57	.67	3.03	1.49	.56	1.84	2.7	4.3	5.1	.212	.212
Chautauqua	2	2A	1	11		1.86	1.72	.80	2.17	1.26	.30	1.13	2.1	3.1	3.9	.176	.197
Huntington	2	2B	2	11		1.86	1.67	.99	2.15	1.09	.10	1.49	2.2	2.8	4.4	.183	.312*
Jasper	2	2A	1	13		1.20	1.69	1.02	2.34	1.55	.12	1.05	2.1	4.2	4.5	.178	.168
Stillwell Lake	2	2B	2	11		1.33	1.44	.83	1.94	1.55	.41	.62	1.6	2.6	5.0	.179	.118
MAP3s/PCN																	
Brookhaven	2	2B	1	13		.87	1.14	.95	1.63	1.41	.14	.60	1.2	2.4	5.1	.222	.131
Ithaca	2	2A	1	19		1.70	1.87	.93	2.51	1.64	.18	1.24	2.6	3.5	6.8	.116	.177
Whiteface	1	1	1	25		1.51	1.46	.52	1.64	.75	.34	.99	1.6	2.1	3.6	.100	.137
North Carolina																	
NADP																	
Clinton Station	2	2A	1	12		.88	.95	.61	1.11	.65	.32	.70	1.0	1.3	2.5	.226	.127
Coweeta	2	2A	1	11		.82	1.02	.65	1.24	.88	.43	.52	0.9	1.8	3.4	.252*	.133
Finley (A)	2	2A	1	12		1.41	1.25	.54	1.41	.72	.42	.91	1.2	1.9	3.0	.163	.162
Lewiston	2	2A	1	12	1	.91	.72	1.42	1.33	1.35	.05	.53	1.0	1.6	4.9	.242*	.223
Piedmont Station	2	2A	1	11		1.38	1.30	.53	1.49	.88	.73	.82	1.1	2.1	3.2	.210	.194
UAPSP																	
Raleigh	3	3	1	21		1.25	1.11	.77	1.41	.88	.26	.59	1.6	1.9	3.6	.169	.261*
Ohio																	
NADP																	
Caldwell	2	2B	2	11		1.65	2.21	.86	3.22	3.48	.78	1.07	1.6	4.3	12.8	.277*	.199
Delaware	2	2A	1	11		1.89	2.14	.59	2.52	1.57	1.18	1.22	1.7	4.2	5.2	.249*	.204
Wooster	3	3	2	11		1.75	1.97	.51	2.23	1.19	.98	1.30	1.7	2.9	4.7	.226	.172
UAPSP																	
Zanesville	3	3	2	21		1.62	2.18	.80	2.85	2.11	.41	1.36	2.5	3.9	9.1	.175	.090

Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 2

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	N	BDL	Concentration										K-S	
						Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	Percentiles mg/l				D-Statistic Gau	Log
Pennsylvania																	
NADP																	
Leading Ridge	2	1	2	12		1.63	1.82	1.03	2.64	2.01	.27	.87	2.3	3.8	7.0	.130	.200
MAP3a/PCN																	
Penn State	2	2B	1	15		1.55	2.46	1.11	3.90	3.34	.44	.56	3.1	7.4	10.5	.239*	.179
UAPSP																	
Scranton	2	2A	1	20		1.30	1.61	.77	2.02	1.21	.30	1.11	1.7	2.8	4.4	.169	.180
South Carolina																	
NADP																	
Clemson	3	3	1	11		.77	.79	.80	1.00	.61	.16	.36	1.1	1.3	2.1	.159	.228
Tennessee																	
NADP																	
Walker Branch	2	2A	2	11		1.27	1.43	.51	1.61	.84	.72	.96	1.2	2.3	3.1	.251*	.205
West Virginia																	
NADP																	
Parsons	2	2A	1	13		1.66	1.89	.77	2.42	1.62	.60	.85	2.2	3.8	5.4	.179	.154
UAPSP																	
Lewisburg	2	2A	2	17		.94	1.32	.73	1.66	1.08	.35	.73	1.5	2.3	3.7	.126	.104
Wisconsin																	
NADP																	
Trout Lake	1	1	1	12		1.62	1.14	.88	1.51	1.08	.15	.77	1.3	2.3	3.9	.195	.158
New Brunswick																	
CANSAP																	
Acadia Fes	3	3	1	3		1.23	1.12	.51	1.21	.51	.62	.62	1.5	1.6	1.6	.352	.363
Charlo	3	3	1	3		.69	.67	.21	.68	.13	.53	.53	0.8	0.8	0.8	.368	.371
St. John	3	3	1	3	1	.77	.18	3.11	.73	.63	.01	.01	1.1	1.1	1.1	.376	.383
Newfoundland																	
CANSAP																	
Gander	3	3	2	3		.27	.29	.61	.33	.22	.19	.19	0.2	0.6	0.6	.355	.332
Goose	2	2B	1	3	1	.20	.08	2.40	.21	.18	.01	.01	0.3	0.4	0.4	.312	.366
Nova Scotia																	
CANSAP																	
Kejimikujik (a)	2	2A	1	3		.30	.27	1.24	.44	.51	.09	.09	0.2	1.0	1.0	.343	.246
Shelburne	2	2A	1	3		.59	.61	.27	.62	.15	.45	.45	0.7	0.8	0.8	.273	.295
Truro	3	3	2	3		1.09	1.05	.34	1.09	.36	.74	.74	1.1	1.5	1.5	.191	.187



Autumn Quarter 1980 Unified Data Summary  
(Sep 1980, Oct 1980, Nov 1980)

28-Jun-1985  
Page 3

Nitrate

State Network Site Name	Overall Rating	Site Rep	Data Comp	Concentration										K-S			
				N	N BDL	Wtd Mean mg/l	Geometric Mean mg/l	SD mg/l	Arithmetic Mean mg/l	SD mg/l	Min	25%	Percentiles 50% mg/l	75%	Max	D-Statistic Gau	Log
Ontario																	
CANSAP																	
Atikokan	3	3	1	3		.77	.92	.47	.99	.45	.58	.58	0.9	1.5	1.5	.214	.180
Dorset (a)	1	1	1	3		1.87	1.94	.47	2.09	1.00	1.29	1.29	1.8	3.2	3.2	.291	.245
ELA (a)	2	2A	1	3		.70	.62	.37	.64	.23	.42	.42	0.6	0.9	0.9	.207	.177
Harrow	3	3	1	3		2.76	2.93	.26	3.00	.82	2.48	2.48	2.6	4.0	4.0	.366	.361
Moosonee	2	2B	1	3		.64	.67	.72	.80	.63	.40	.40	0.5	1.5	1.5	.360	.335
Mount Forest (a)	3	3	1	3		2.31	2.50	.51	2.75	1.53	1.86	1.86	1.9	4.5	4.5	.385	.385
Simcoe	3	3	1	3		2.31	2.42	.32	2.51	.85	1.99	1.99	2.0	3.5	3.5	.376	.373
Trout Lake	3	2B	3	2		2.43	2.24	.14	2.25	.32	2.02		2.3		2.5	.260	.260
APIOS-D																	
Dorset (b)	1	1	1	34		2.04	2.05	.84	2.90	2.83	.40	1.26	1.9	3.6	15.3	.199*	.055
Longwoods (b)	2	2B	1	22		2.26	2.19	.85	2.86	1.79	.18	1.32	2.5	4.6	6.1	.131	.121
Railton	2	1	2	22		2.85	2.91	.88	3.90	2.95	.22	2.04	3.3	4.7	13.3	.201*	.161
APN																	
Chalk River	3	2A	3	26	1	1.72	1.31	1.32	1.91	1.22	.01	.92	1.7	2.6	4.9	.186*	.229*
ELA (b)	2	2A	2	22	3	.73	.32	1.91	.77	.93	.01	.24	0.6	1.0	4.5	.239*	.234*
Long Point	3	3	1	20		2.41	2.73	.65	3.33	2.21	.93	1.71	2.6	4.7	8.9	.182	.098
APIOS-C																	
Alvinston	2	2A	2	3		3.22	3.56	.46	3.82	1.76	2.30	2.30	3.4	5.8	5.8	.259	.205
Campbellford	2	2A	2	3		3.60	3.82	.16	3.85	.62	3.23	3.23	3.9	4.5	4.5	.175	.188
Colchester	2	2A	1	3		3.43	3.42	.20	3.47	.71	2.88	2.88	3.3	4.3	4.3	.274	.253
Dalhousie Mills	3	2B	3	3		2.71	2.70	.12	2.72	.31	2.39	2.39	2.7	3.0	3.0	.204	.219
Dorion	1	1	1	3		1.10	1.04	.61	1.18	.78	.71	.71	0.8	2.1	2.1	.375	.367
Dorset (c)	1	1	1	3		1.51	1.46	.21	1.48	.29	1.15	1.15	1.6	1.7	1.7	.266	.285
Ear Falls	3	3	2	3		.49	.41	.39	.43	.16	.27	.27	0.4	0.6	0.6	.204	.250
Golden Lake	2	1	2	3		1.86	1.65	.98	2.11	1.38	.53	.53	2.7	3.1	3.1	.344	.366
Gowganda	2	2A	1	3		1.22	1.43	.47	1.54	.73	.93	.93	1.3	2.3	2.3	.278	.227
Kaladar	3	1	3	3		2.38	2.12	.44	2.26	1.00	1.42	1.42	2.0	3.4	3.4	.271	.222
Killarney	2	2A	1	3		2.26	2.48	.28	2.54	.67	1.82	1.82	2.7	3.1	3.1	.236	.266
Moonbeam	2	2A	2	3		1.57	1.61	.72	1.89	1.20	.75	.75	1.8	3.1	3.1	.206	.219
Nakina	3	3	3	2		.69	.74	.25	.75	.19	.62		0.8		0.9	.260	.260
Palmerson	2	2A	2	3		2.68	2.92	.54	3.23	1.89	1.99	1.99	2.3	5.4	5.4	.356	.336
Port Stanley	3	2B	3	3		3.38	3.56	.69	4.21	3.09	2.88	2.88	2.8	7.8	7.8	.343	.304
Ramsey	2	2A	1	3		1.06	1.20	.32	1.24	.36	.84	.84	1.3	1.6	1.6	.263	.291
Smith's Falls	3	3	3	2		2.12	2.11	.15	2.13	.31	1.90		2.1		2.3	.260	.260
Uxbridge	2	2B	2	3		3.12	3.06	.48	3.32	1.70	2.13	2.13	2.6	5.3	5.3	.338	.310
Waterloo	2	2A	2	3		2.68	2.91	.56	3.25	1.95	1.95	1.95	2.3	5.5	5.5	.353	.330
Whitney	1	1	1	3		1.43	1.34	.31	1.39	.42	.97	.97	1.4	1.8	1.8	.181	.194
Wilkesport	2	2A	2	3		3.34	3.59	.23	3.66	.90	3.10	3.10	3.2	4.7	4.7	.368	.364
Quebec																	
CANSAP																	
Chibougamau	3	3	2	3		1.00	1.05	.48	1.14	.59	.80	.80	0.8	1.8	1.8	.385	.385
Nitchequon	2	2B	2	3	1	.29	.11	2.70	.37	.40	.01	.01	0.3	0.8	0.8	.229	.308
Quebec City	3	3	1	3		1.72	1.82	.40	1.91	.66	1.15	1.15	2.2	2.3	2.3	.351	.361
Sept Isles	3	3	1	3		.91	.92	.73	1.06	.60	.40	.40	1.2	1.6	1.6	.283	.328
St. Hubert	3	3	1	3		2.31	2.36	.28	2.43	.71	1.95	1.95	2.1	3.2	3.2	.352	.342

## **APPENDIX F**

### **INVENTORY OF WET DEPOSITION SITES**

This appendix contains a listing of the sites found in Tables 1 to 10 of Appendix E, including their latitude, longitude and elevation, and a brief operating history. The information was taken from the Acid Deposition System (ADS) database, and is ordered by state and province, for easy cross-referencing with Tables 1 to 10 of Appendix E. Also included is a set of maps (ordered by network) showing the location of each site.

Note that the information in this appendix includes sites in the ADS database in all of North America, not just those in the eastern part of the continent, as well as some sites which were not operational in 1980.

COLUMN HEADING DEFINITIONS FOR WET DEPOSITION SITES IN ADS

<u>Column</u>	<u>Column Head</u>	<u>Explanation</u>
1	ADS SITE IDENT	The first four characters of the six character site identification. The first three numbers identify a geographic location. The fourth character (the letter a, b, c, ...) identifies colocated samplers at a site.
2	NETWORK	The network which operates the site. (Note all EPRI/SURE sites are identified as UAPSP sites; all NADP and NTN sites are identified as NADP sites.)
3	NET SITE IDENT	The network's 10 character number of name for the site.
4	SITE NAME	The network's name of the site concatenated with the state or province.
5	LATITUDE d m s	The North latitude of the site in degrees, minutes and seconds.
6	LONGITUDE d m s	The West longitude of the site in degrees, minutes and seconds.
7	ELEV M	The elevation, in meters above sea level, of the site.
8	FIRST ACTIVE DATE	The date on which the network started operating the site.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 1

Alabama, NADP, Blackbelt

STATE  
NETWORK  
SITE NAME

ADS  
SITE LATITUDE LONGITUDE ELEV rev REV REV  
IDENT d m s d m s m num START END

OPERATING HISTORY

Alabama (1)  
NADP (01)  
Blackbelt (011000)  
UAPSP (08)  
Selma (15)

329a 32 27 30 87 14 31 58 00 8/83

235a 32 28 25 87 05 03 42 00 10/81 1/82 Operated under normal UAPSP sampling protocol in last quarter of 1981. Co-located sampler at this site, see 235b.  
01 1/82 10/82 UAPSP sampling protocol expanded to include NITRITE in CY 82 See co-located sampler 235b.  
02 10/82 1/83 Strong acid analysis discontinued on Sept 30, 1982. See co-located sampler 235b.  
03 1/83 Discontinued analysis of NITRITE, otherwise no change in protocol See co-located sampler 235b.

Selma-2 (15 smplr 2)

235b 32 28 25 87 05 03 42 00 10/81 1/82 Operated under normal UAPSP sampling protocol in last quarter of 1981 See co-located sampler 235a.  
01 1/82 10/82 UAPSP sampling protocol expanded to include NITRITE in CY 82 See co-located sampler 235a.  
02 10/82 1/83 Strong acid analysis discontinued on Sept 30, 1982. See co-located sampler 235a.  
03 1/83 1/83 Discontinued analysis of NITRITE on 1/1/83. Discontinued operation of co-located sampler on 1/21/83. This ADS ident TERMINATED.

EPA-IV (13)  
Dewey Armory (ALDEWEYARM)

259a 32 34 03 85 55 54 153 00 3/82 10/83 Samples analyzed by RTI  
01 10/83 Samples analyzed by Global Geochem after 10/1/83

TVA (16)  
COLBERT 1 (COLBERT 1)

385a 34 46 13 87 50 09 152 00 12/78 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
COLBERT 8 (COLBERT 8) 386a 34 46 18 87 54 05 146 00 11/78 8/81 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
HYTOP (HYTOP) 409a 34 53 39 86 05 36 544 00 5/78 10/80 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
WIDOWS CREEK 23 (WIDOWS C23) 408a 35 55 05 85 44 02 209 00 11/78 12/80 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
WIDOWS CREEK 3 (WIDOWS C3) 406a 34 51 31 85 43 21 469 00 11/78 12/80 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
WIDOWS CREEK 9 (WIDOWS C9) 407a 34 52 04 85 43 17 457 00 4/81 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).

Arkansas (5)

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 2

Arkansas, NADP, Buffalo River

STATE  
NETWORK  
SITE NAME

ADS  
SITE LATITUDE LONGITUDE ELEV ADS  
IDENT d m s d m s m num START END

OPERATING HISTORY

NADP (01)  
Buffalo River (041620)

269a 36 05 00 92 33 00 265 00 7/82 12/83  
01 12/83

On 27 Dec 83 site moved approximately 2 km NW because of loss of ground cover and increased vehicle activity at previous location. No change made to the NET ident or ADS ident.

Caddo Valley (040380)  
Fayetteville (042700)  
Warren 2WSW (040260)

330a 34 10 46 93 05 55 71 00 12/83  
004a 36 06 02 94 10 24 391 00 5/80  
268a 33 36 15 92 06 02 78 00 5/82

Delaware (10)  
MAP3s/PCN (06)  
Lewes (7)

013a 38 46 00 75 00 00

0 00 2/78 11/80  
01 11/80

This MAP3S site started operation with the Battelle Northwest collector; surface area = 490 sq cm. On 10-Nov-80 the collector was changed to the Aerochem Metrics model 301-A2 with a surface area of 640 sq cm.

UAPSP (08)  
Indian River (03)

152a 38 34 50 75 14 45

6 00 8/78 1/79  
01 1/79 6/80

Start up phase for this EPRI/SURE site DO NOT USE DATA  
EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 152b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site. STATION TERMINATED June 30, 1980.

Indian River-2 (03 smplr 2)

152b 38 34 50 75 14 45

6 00 8/78 1/79  
01 1/79 12/79

Start up phase for this EPRI/SURE site DO NOT USE DATA  
EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 152a. The second sampler was removed after one year, this ADS number DISCONTINUED.

Florida (12)  
NADP (01)  
Austin-Cary Forest (100020)  
Bradford Forest (100360)  
CIFANT (100380)  
Everglades Nat. Pa (101190)  
Quincy (101400)  
Verna Well Field (104100)

014a 29 45 37 82 11 56 46 00 10/78  
015a 29 58 29 82 11 53 44 00 10/78  
336a 28 32 34 80 38 40 2 00 8/83  
016a 25 23 40 80 41 45 2 00 6/80  
337a 30 32 56 84 35 50 69 00 3/84  
338a 27 22 48 82 17 02 25 00 8/83

7/81 Operations TERMINATED on 7/14/81.

Georgia (13)  
NADP (01)  
Bellville (112040)  
Georgia Station (114140)  
Tifton, ARS (115000)  
UAPSP (08)

339a 32 08 30 81 58 18 61 00 4/83  
017a 33 10 40 84 24 22 270 00 10/78  
340a 31 28 25 83 31 59 104 00 10/83

1  
3  
1

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 3

Georgia, UAPSP, Uvalda

STATE NETWORK SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
Uvalda (14)	237a	32 03 18	82 28 25	64	00 10/81	10/82		Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982. Co-located sampler 237b started operation on 10/9/83.
Uvalda-2 (14 smplr 2)	237b	32 03 18	82 28 25	64	00 10/83			Start of operation as co-located sampler to site 237a on 10/9/83.
EPA-IV (13) Hiawassee (GAHIWASSE)	261a	34 50 33	83 43 03	636	00 5/82	10/83		Samples analyzed by RTI Samples analyzed by Global Geochem after 10/1/83
Summerville (GASUMMERVI)	262a	34 28 22	85 24 27	202	00 5/82	10/83		Samples analyzed by RTI Samples analyzed by Global Geochem after 10/1/83
Illinois (17) * NADP (01)								
Argonne (141980)	021a	41 42 04	87 59 43	229	00 3/80	5/80		On 25 May 80 site moved 400m W. No change made to NET ident or ADS ident.
Bondville (141160)	020a	40 03 12	88 22 19	212	00 2/79			See co-located sites 020b and 020c. NADP/NTN comparison site with NET ident 141161, ADS ident 020c. Comparison involves comparability of Geotech and Aerochem Metrics Wet/Dry collectors.
Bondville intercom (141161)	020c	40 03 12	88 22 19	212	00 9/83			See co-located sites 020a and 020b. NADP/NTN comparison site with NET ident 141160, ADS ident 020a. Comparison involves comparability of Geotech and Aerochem Metrics Wet/Dry collectors.
Dixon Springs (146340)	023a	37 26 08	88 40 19	161	00 1/79			
NIARC (141800)	024a	41 50 29	88 51 04	265	00 5/81			
Salem (144740)	161a	38 38 36	88 58 01	173	00 4/80	4/81		From 14 Apr 1981 to 3 Nov 1981 all chemistry analysis values were excluded (NS) due to a faulty collector lid seal.
					01 4/81	11/81		On 30 Oct 81 a Belfort weighing recording raingage was installed 10 ft NW of and to replace an 8-inch stick or standard gage. No change made to NET ident or ADS ident.
					02 11/81			
Southern Ill U (143580)	022a	37 42 36	89 16 08	146	00 7/79			
MAP3a/PCN (06)	020b	40 03 12	88 22 19	212	00 11/77	2/80		This MAP3S site started operation with the Battelle Northwest collector; surface area = 490 sq cm.
Illinois (5)					01 2/80	1/82		On 16-Feb-80 the collector was changed to the HASL model with surface area = 325 sq cm.
					02 1/82			On 5-Jan-82 the collector was changed to the Aerochem Metrics model 301-A2 with surface area = 640 sq cm.
GLAD (14) Evanston (142360010)	288a	42 03 36	87 40 25	183	00 7/81			

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 4

Illinois, GLAD, Jardine Plant

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
		Jardine Plant (141220043)	289a	41 53 41	87 36 23	194	00	6/81		
		South Water Plant (141220034)	290a	41 45 25	87 32 45	187	00	6/81		
Indiana	(18)									
	NADP	(01)								
		Huntington (152020)	343a	40 50 24	85 27 50	244	00	8/83		
		Indiana Dunes (153420)	025a	41 37 57	87 05 16	208	00	7/80	3/81	On 17 March 1981 site moved 62m South off of a roof to ground level. NET ident was changed to 153421, no change to ADS ident. Sampler was located on a nearby roof prior to 3/17/81. Sampling did not start in current location until 3/19/81.
							01	3/81		
		Purdue U Ag Farm (154100)	272a	40 28 17	85 59 18	215	00	7/82		
	UAPSP	(08)								
		Fort Wayne (07)	156a	41 02 39	85 19 08	244	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	10/81	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 156b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site.
							02	10/81	1/82	Transferred operation from EPRI/SURE to UAPSPS and operated under normal UAPSPS protocol in last quarter of 1981.
							03	1/82	10/82	UAPSPS one year effort to analyze NITRITE in 1982, otherwise protocol remained the same.
							04	10/82	1/83	Strong acid analysis discontinued on Sept 30, 1982.
							05	1/83		Discontinued analysis of NITRITE, otherwise no change in protocol
		Fort Wayne-2 (07 smplr 2)	156b	41 02 39	85 19 08	244	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	12/79	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 156a. The second sampler was removed after one year, this ADS number DISCONTINUED.
		Rockport (05)	154a	37 52 50	87 07 47	131	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	10/81	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 154b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site.
							02	10/81	10/82	Transferred operation from EPRI/SURE to UAPSPS and operated under normal UAPSPS protocol beginning the last quarter of 1981.
							03	10/82		Strong acid analysis discontinued on Sept 30, 1982.
		Rockport-2 (05 smplr 2)	154b	37 52 50	87 07 47	131	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	12/79	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 154a. The second sampler was removed after one year, this ADS number DISCONTINUED.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 5

Kentucky, NADP, Clark State Fish H

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
Kentucky (21)										
NADP (01)										
		Clark State Fish H (183560)	348a	38 07 06	83 32 49	204	00	8/83		
		Lilley Cornett Woo (182260)	347a	37 04 40	82 59 37	335	00	9/83		
		Perryville (180360)	346a	37 40 39	84 57 25	277	00	11/83		
UAPSP (08)										
		Morehead (11)	239a	38 08 10	83 27 17	235	00	10/81	10/82	Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982.
							01	10/82		
EPA-IV (13)										
		Grayson (KYGRAYSONL)	260a	38 14 00	82 59 00	213	00	4/82	10/83	Samples analyzed by RTI
							01	10/83		Samples analyzed by Global Geochem after 10/1/83
		Mammoth Cave (KYMAMMOTHCA)	265a	37 13 00	86 04 00	219	00	10/82	10/83	Samples analyzed by RTI
							01	10/83		Samples analyzed by Global Geochem after 10/1/83
TVA (16)										
		CUMBERLAND 20 (CUMBERLA20)	394a	36 50 17	87 10 12	0	00	7/77	12/79	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		LBL (LBL)	410a	36 47 27	88 04 01	177	00	6/77		Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		PARADISE 24 (PARADISE24)	401a	37 11 20	86 58 38	139	00	12/78	3/81	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		SHAWNEE 13 (SHAWNEE 13)	402a	37 04 09	88 46 21	118	00	5/81		Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		SHAWNEE 20 (SHAWNEE 20)	403a	37 08 40	88 49 17	107	00	12/78	12/80	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		SHAWNEE 22 (SHAWNEE 22)	404a	37 08 18	88 48 12	113	00	7/80	8/80	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
Louisiana (22)										
NADP (01)										
		Iberia (191260)	275a	29 55 47	91 42 54	6	00	11/82		
		N La Hill Farm (190620)	274a	32 45 04	93 03 02	61	00	11/82		
		Southeast (193060)	349a	30 48 41	90 10 51	78	00	1/83		
Maine (23)										
NADP (01)										
		Acadia < 11/81 (200010)	162a	44 24 30	68 14 42	37	00	11/80	11/81	On 3 Nov 1981, site moved 4 km SSW and 85 meters higher. The NET ident was changed to 200011 and the ADS ident was changed to 257a00.
		Acadia > 11/81 (200011)	257a	44 22 27	68 15 39	122	00	11/81		This site was identified as NET ident 200010 and ADS ident 162a00 prior to 3 Nov 1981.



Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 6

Maine, NADP, Bridgton

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	rev num	REV START	REV END	OPERATING HISTORY
Maine	NADP	Bridgton (200277)	164a	44 06 27	70 43 44	222	00	9/80		NADP comparison site with CANSAP network April 1981 - April 1984. See ADS ident 163b. Comparison involves comparability of U. S. and Canadian data.
		Caribou (a) (200045)	163a	46 52 08	68 00 55	191	00	4/80		
		Greenville Station (200935)	030a	45 29 23	69 39 52	322	00 01	11/79 7/80	7/80	On 15 July 80 a Belfort weighting and recording rain gage was installed. Prior to this date there was no gage on the site.
	CANSAP (05)	Caribou (b) (13 000)	163b	46 52 08	68 00 55	191	00	4/80		See co-located NADP site 163a.
	UAPSP (08)	Winterport (13)	240a	44 37 05	68 58 30	67	00 01	10/81 10/82	10/82	Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982.
	Maryland (24)	NADP (01)								
		Wye (211320)	350a	38 54 47	76 09 09	6	00	3/83		
	Massachusetts (25)	NADP (01)								
		Cadwell (220815)	276a	42 21 40	72 23 27	283	00	3/82		Collector located on rooftop. On 23 Sept 1982 site moved off rooftop to ground level. No change made to NET ident or ADS ident.
		East (221325)	277a	42 23 02	71 12 53	20	00	2/82		
		NACL (220155)	251a	41 58 23	70 01 12	34	00 01	12/81 9/82	9/82	
Maine	UAPSP (08)	Montague (01)	149a	42 32 00	72 32 08	73	00 01	8/78 1/79	1/79 7/80	Start up phase for this EPRI/SURE site DO NOT USE DATA EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 149b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site. Sampler moved to ADS location 150a on 1-Aug-80. Site 149a TERMINATED.
		Montague-2 (01 smplr 2)	149b	42 32 00	72 32 08	73	00 01	8/78 1/79	1/79 12/79	Start up phase for this EPRI/SURE site DO NOT USE DATA EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 149a. The second sampler was removed after one year, this ADS number DISCONTINUED.
		Turners Falls (01)	150a	42 35 50	72 32 55	98	00 01	8/80 10/81	10/81 10/82	EPRI/SURE site moved from 149a on 1-Aug-80 Transferred operation from EPRI/SURE to UAPSPS and operated under normal UAPSPS protocol in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982.
							02	10/82		

Michigan (26)

87

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 7

Michigan, NADP, Chassell

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
NADP (01)										
		Chassell (232241)	258a	47 06 03	88 33 10	279	00	2/83		This site was identified as NET ident 232240 and ADS ident 165a00 prior to 15 Feb 1983. NADP comparison site with CANSAP network April 1981 - April 1984. See ADS ident 031b. Comparison involves the comparability of US and Canadian data. On 15 Feb 1983, site moved 13 km SE. The NET ident was changed to 232241, the ADS ident to 258a00 and the SITE names to Chassell. This site was considered nonstandard by NADP because of discontinuous sampling. Collector was moved each year to 026a from May to November. This site is closed by federal law from November through April every year. Therefore the site is considered nonstandard by NADP. Collector was moved annually to site 165a from November to May in 1980, 1981, and 1982.
		Douglas Lake (230920)	031a	45 33 40	84 40 42	233	00	7/79		
		Houghton (232240)	165a	47 13 33	88 37 50	193	00	10/80	2/83	
		Isle Royal Park (232570)	026a	47 54 43	89 09 10	209	00	8/80		
		Kellogg (232660)	032a	42 24 37	85 23 34	288	00	6/79		On 27 Sept 83 the collector was moved to about 10m from the rain gage. No change made to the NET ident or ADS ident.
		Raco (230980)	351a	46 22 26	84 44 31	260	00	5/84		
		Wellston (235340)	033a	44 13 28	85 49 07	292	00	10/78	9/83	
							01	9/83		
CANSAP (05)										
		Pellston (13 020)	031b	45 33 40	84 40 42	233	00	7/79	1/80	This site is part of an International study using co-located samplers, see 031a. Collector: Sangamo model C. On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. See co-located NADP site 031a.
							01	1/80		
UAPSP (08)										
		Gaylord (10)	241a	44 56 58	84 38 30	473	00	11/81	10/82	Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982.
							01	10/82		
GLAD (14)										
		Bay City (230420002)	291a	43 39 30	83 53 45	187	00	3/81		This GLAD network site TERMINATED on May 17, 1983. Sampler moved to Eagle Harbor (ADS site 295a).
		Beaver Island (230860001)	292a	45 44 30	85 30 30	183	00	9/81		
		Benton Harbor (230460004)	293a	42 07 00	86 28 30	191	00	2/81		
		Cooper Harbor (232740001)	294a	47 28 00	87 52 00	191	00	6/81	5/83	
		Eagle Harbor (232740002)	295a	47 27 28	88 09 42	188	00	6/83		
		Empire (232940001)	296a	44 51 16	86 02 08	233	00	6/81		
		Escanaba (231420008)	297a	45 44 30	87 03 30	196	00	6/81		
		Grand Marais (230080001)	298a	46 40 00	85 58 00	191	00	7/81		
		Mount Clemens (233660002)	299a	42 34 00	82 50 40	176	00	4/82		
		Muskegon (233760007)	301a	43 08 40	86 16 20	190	00	3/81		
		Ontonagon (234060002)	302a	46 49 20	89 38 00	194	00	7/81		

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 8

Michigan, GLAD, Port Austin

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	rev num	REV START	REV END	OPERATING HISTORY
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		Port Austin (232340002)	303a	44 02 50	82 59 40	185	00	4/81		
		Port Sanilac (234800001)	304a	43 26 20	82 32 32	190	00	3/81		
		Tawas Point (234110002)	305a	44 16 00	83 26 30	179	00	5/81		

Minnesota (27)

NADP (01)

		Camp Ripley (242360)	352a	46 14 58	94 29 50	410	00	10/83		
		Fernberg (241840)	166a	47 56 45	91 29 43	524	00	11/80	3/81	This NADP site operated with collector at ground level within a clearing until March 1981.

01	3/81	5/81	Collector and raingage(?) moved to a trailer rooftop within existing clearing.
02	5/81		Collector and raingage returned to ground level about 30m from trailer roof top. Co-located with ADS-IDENT 166b.

		Lamberton (242720)	035a	44 14 14	95 18 02	343	00	1/79		
		Marcell (241660)	034a	47 31 52	93 28 07	431	00	7/78		

APIOS-D (07)

		Fernberg (6051)	166b	47 56 51	91 29 26	506	00	10/81	5/82	Cold weather collector = SES BULK sampler and Nepher shielded gauge. Co-located with ADS-IDENT 166a.
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01	5/82		Warm weather collector and gauge
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GLAD (14)

		Duluth (241040029)	306a	46 46 07	92 05 15	198	00	7/81		
		Gooseberry Falls (241840016)	307a	46 24 40	91 28 48	206	00	9/81		
		Gull Lake (240900001)	308a	46 24 40	94 21 15	383	00	1/82		
		Hovland (240800009)	309a	47 50 50	89 57 45	224	00	7/81		

Mississippi (28)

NADP (01)

		Clinton (251080)	242b	32 18 22	90 18 54	90	00	7/84		See co-located UAPSP site 242a.
		Meridian (251460)	036a	32 20 04	88 44 42	89	00	4/80		

UAPSP (08)

		Clinton (16)	242a	32 21 06	90 17 15	76	00	10/81	10/82	Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. See co-located NTN site 242b.
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01	10/82		Strong acid analysis discontinued on Sept 30, 1982. See co-located NTN site 242b which began operations on July 11, 1984.
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EPA-IV (13)

		University (MSUNIVERSI)	263a	34 23 00	89 32 00	35	00	5/82	10/83	Samples analyzed by RTI
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01	10/83		Samples analyzed by Global Geochem after 10/1/83
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Missouri (29)

NADP (01)

		Ashland (260380)	252a	38 45 13	92 11 55	239	00	10/81		
		University Forest (260560)	253a	36 54 39	90 19 06	154	00	10/81		

New Hampshire (33)

NADP (01)

		Hubbard Brook (300240)	039a	43 56 35	71 42 12	250	00	7/78		
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Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 9

New Jersey, NADP, Princeton

STATE  
NETWORK  
SITE NAME

ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	rev num	REV START	REV END
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OPERATING HISTORY

New Jersey (34)  
NADP (01)

Princeton (312980)

167a	40 20 44	74 37 01	37	00	8/80	7/81
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On 7 July 1981, site moved 40 km SW. The NET ident was changed to 312981, the ADS ident to 285a00 and the SITE names to Washington Crossing. This site was part of the WMO network. Data collected at Princeton was considered nonstandard by NADP because it did not follow siting guidelines.

Washington Xing (312981)

285a	40 18 54	74 51 17	72	00	8/81	
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This NADP site was formerly located in the town of Princeton. This site was identified as NET ident 312980 and ADS ident 167a00 prior to 7 July 1981.

New York (36)  
NADP (01)

Aurora (330860)  
Bennett Bridge (335240)  
Biscuit Brook (336840)  
Chautauqua (331000)  
Huntington (332020)

040a	42 44 02	76 39 35	249	00	4/79	
046a	43 31 34	75 56 50	245	00	6/80	
359a	41 59 39	74 30 13	634	00	10/83	
041a	42 17 58	79 23 47	488	00	6/80	
168a	43 58 19	74 13 25	500	00	10/78	6/84

On 15 June 84 site moved to new forest clearing. No change to NET ident or ADS ident.

Jasper (336500)  
Knobit (331220)  
Stilwell Lake (335140)

047a	42 06 22	77 32 08	634	00	2/80	
042a	42 22 41	73 30 10	406	00	1/80	
045a	41 21 00	74 02 22	186	00	6/79	10/84

Comparison site with NET ident 335141, ADS ident 358a from 6 Sept 1983 to 2 Oct 1984. Comparison involved impact on data of site relocation. On 2 Oct 1984 operations TERMINATED by sponsor and site replaced by NET ident 335141, ADS ident 358a. Comparison site with NET ident 335140, ADS ident 045a from 6 Sept 1983 to 2 Oct 1984. Comparison involved impact on data of site relocation. Note: dry side started 6 Sept 83, wet side started 13 Sept 83. This site was identified as NET ident 335140 and ADS ident 045a prior to 13 Sept 83. See co-located MAP3S site 043a.

West Point (335141)

358a	41 21 03	74 02 54	203	00	9/83	
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Whiteface (332021)  
MAP3S/PCN (06)  
Brookhaven (6)

043b	44 23 26	73 51 34	610	00	7/84	
048a	40 52 00	72 53 00	25	00	2/78	2/81
				01	2/81	

Started operation using Battelle Northwest sampler with surface area = 490 sq cm. On 24-Feb-81 the sampler was changed to an Aerochem Metrics model 301-A2 with surface area = 640 sq cm.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 10

New York, MAP3a/PCN, Ithaca

STATE  
NETWORK  
SITE NAME

ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END
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OPERATING HISTORY

Ithaca (2)

044a	42 24 03	76 39 12	509	00	10/76	8/77	This MAP3S site started operation with the Battelle Northwest collector; surface area = 490 sq cm.
				01	8/77	9/77	Analysis method changed. NH4 was colorimetry now Ion Chromatography. NA and K were Flame Emission Spectrography - now Ion Chromatography.
				02	9/77	11/79	Analysis method changed. CA and MG were Flame Emission Spectrography - now Flame Atomic Absorption. SO4 was colorimetry - now Colorimetry with field fixation.
				03	11/79		Collector changed to HASL model with surface area = 640 sq cm.

Whiteface (1)

043a	44 23 26	73 51 34	610	00	10/76	8/77	This MAP3a/PCN site started operation with the Battelle Northwest collector; surface area = 490 sq cm.
				01	8/77	9/77	Analysis method changed in August 1977. NH4 changed from colorimetry to Ion Chromatography. NA and K changed from Flame Emission Spectrometry to Ion Chromatography.
				02	9/77	12/79	Analysis method changed in mid September 1977. CA and MG changed from Flame Emission Spectrometry to Flame Atomic Absorbtion on 9/14/77. SO4 (S-IV) changed from colorimetry to collimetry with field fixation on 9/6/77.
				03	12/79		Collection instrument changed to HASL with surface area = 640 sq cm in December 1979. See co-located NTN site 043b which started operations July 3, 1984.

UAPSP (08)

Big Moose (21)

243a	43 49 03	74 54 08	603	00	10/81	1/82	Operated under normal UAPSP sampling protocol in last quarter of 1981
				01	1/82	10/82	UAPSP sampling protocol expanded to include NITRITE in CY 82
				02	10/82	1/83	Strong acid analysis discontinued on Sept 30, 1982.
				03	1/83		Discontinued analysis of NITRITE, otherwise no change in protocol

GLAD (14)

Cape Vincent (333340099)  
Dunkirk (331600099)  
Fair Haven (330860099)  
Grand Island (332000099)  
Olcott (334720099)  
Rochester (335760099)  
SILVER CREEK (336240099)

310a	44 05 30	76 20 30	80	00	1/82	
311a	42 30 13	79 19 26	182	00	1/82	9/84
312a	43 19 08	76 42 11	74	00	1/82	11/84
313a	43 03 30	78 58 00	173	00	1/82	
314a	43 20 27	78 41 35	84	00	1/82	
315a	43 13 48	77 34 45	81	00	1/82	
381a	42 34 49	79 08 02	199	00	10/84	

SODUS POINT (337240099)

380a	43 16 24	76 58 32	78	00	11/84	
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Initial period of operation of this site in the GLAD network  
Initial period of operation of this site in the GLAD network

North Carolina (37)  
NADP (01)

- 91 -

4-Sep-1985  
Page 11

Page 11

1921

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 12

Ohio, MAP3s/PCN, Oxford

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE IDENT	d m s	d m s	m	num	START	END	
SITE NAME								
Oxford (8)	057a	39 31 51	84 43 25	284	00	9/78	11/80	Started operation using Battelle Northwest sampler with surface area = 490 sq cm. On 24-Nov-80 the sampler was changed to the Aerochem Metrics model 301-A2 with surface area = 640 sq cm.
					01	11/80		
UAPSP (08)								
McArthur (22)	244a	39 14 06	82 28 41	224	00	10/81	10/82	Operated under normal UAPSP sampling protocol beginning in last quarter of 1981.
					01	10/82	5/84	Strong acid analysis discontinued on Sept 30, 1982. Site TERMINATED on 5/15/84.
Zanesville (04)	153a	39 59 02	82 01 05	250	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
					01	1/79	10/81	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 153b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site.
					02	10/81	10/82	Transferred operation from EPRI/SURE to UAPSPS and operated under normal UAPSPS protocol beginning in last quarter of 1981.
					03	10/82		Strong acid analysis discontinued on Sept 30, 1982.
Zanesville-2 (04 smplr 2)	153b	39 59 02	82 01 05	250	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
					01	1/79	12/79	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 153a. The second sampler was removed after one year, this ADS number DISCONTINUED.
GLAD (14)								
Ashtabula (360200001)	316a	41 54 30	80 46 30	179	00	1/82	9/84	Initial period of operation of this site in the Glad network
CONNEAUT (361480001)	382a	41 57 36	80 34 23	201	00	10/84		
Fairport Harbor (362100001)	317a	41 45 17	81 16 25	203	00	1/81		
Lorain (363620014)	318a	41 28 20	82 08 30	192	00	2/81		
Put-in-Bay (365260001)	319a	41 39 29	82 49 40	177	00	2/81		
Toledo (365200007)	320a	41 41 30	83 24 32	177	00	1/81		
Pennsylvania (42)								
NADP (01)								
Kane (392940)	063a	41 35 52	78 46 04	618	00	7/78		
Leading Ridge (394200)	064a	40 39 32	77 56 10	282	00	4/79		
Milford (397220)	371a	41 19 39	74 49 13	212	00	12/83		
Penn State (391520)	065b	40 47 18	77 56 47	393	00	6/83		See co-located MAP3S site 065a. NADP/NTN comparison site. See ADS ident 065c00. Comparison involves comparability of Leonard Mold and Die and Aerochem Metrics Wet/Dry collectors.
								See co-located MAP3S site 065a. NADP/NTN comparison site. See ADS ident 065b00. Comparison involves comparability of Leonard Mold and Die and Aerochem Metrics Wet/Dry collectors.
Penn State (391521)	065c	40 47 18	77 56 47	393	00	10/83		

MAP3s/PCN (06)

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985

Page 13

Pennsylvania, MAP3s/PCN, Penn State

STATE

NETWORK

SITE NAME

Penn State (3)

ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END
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OPERATING HISTORY

065a	40 47 18	77 56 47	393	00	9/76	8/77	Started operation using Battelle Northwest sampler with surface area = 490 sq cm. Analysis method changed. NH4 was colorimetry - now Ion Chromatography. NA and K were Flame Emission Spectrography - now Ion Chromatography. Analysis method changed. CA and MG were Flame Emission Spectrography - now Flame Atomic Absorption. SO4 was colorimetry - now Colorimetry with field fixation. Collection instrument changed. Was BMW - now HASL with surface area = 640 sq cm. Collection instrument changed. Was HASL - now Aerochem Metrics model 301-A2 with surface area = 640 sq cm. See co-located MTN site 065b which started June 7, 1983 and 065c which started October 4, 1983.
				01	8/77	9/77	
				02	9/77	12/79	
				03	12/79	3/81	
				04	3/81		

UAPSP (08)

Scranton (02)

151a	41 34 30	75 59 40	335	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA. Started operation as a co-located site. See 151b. On 1/1/80 continued operation in EPRI/SURE network with only one sampler in use. Station NOT IN USE. Started operation as UAPSP site. Strong acid analysis discontinued on Sept 30, 1982. EPRI/SURE start up phase DO NOT USE DATA. One year operation with two samplers at this site, see 151a.
				01	1/79	1/81	
				02	1/81	10/81	
				03	10/81	10/82	
				04	10/82		
151b	41 34 30	75 59 40	335	00	8/78	1/79	
				01	1/79	12/79	

Scranton-2 (02 smplr 2)

GLAD (14)

Erie (393060099)

321a	42 07 48	80 06 03	183	00	1/82	
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South Carolina (45)

NADP (01)

Clemson (421880)

066a	34 40 28	82 50 09	221	00	3/79		Site is considered nonstandard by NADP because location of collector does not follow siting guidelines.
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EPA-IV (13)

CAPE ROMAIN (SCCAPEROMA)

413a	32 55 59	79 39 27	5	00	8/83	10/83	Samples analyzed by RTI. Samples analyzed by Global Geochem after 10/1/83.
				01	10/83		

CONGAREE SWAMP (SCCONGAREE)

Delta (SCDELTA000)

414a	33 48 56	80 49 38	32	00	10/83		Samples analyzed by Global Geochem. Samples analyzed by RTI. Samples analyzed by Global Geochem after 10/1/83.
267a	34 32 22	81 33 40	113	00	12/82	10/83	
				01	10/83		

Long Creek (SCLONGCREE)

266a	34 48 19	83 14 17	602	00	11/82	10/83	Samples analyzed by RTI. Samples analyzed by Global Geochem after 10/1/83.
				01	10/83		

Tennessee (47)



Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 14

Tennessee, NADP, Elkmont

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
	NADP (01)									
		Elkmont (441190)	028a	35 39 52	83 35 25	640	00	8/80		
		Walker Branch (440040)	171a	35 57 41	84 17 14	341	00	3/80		See co-located MAP3S site 171b.
	MAP3s/PCN (06)									
		Oak Ridge (9)	171b	35 57 41	84 17 14	341	00	1/81		See co-located NADP/MTN site 171a. This MAP3S site started operation with Aerochem Metrics model 301-A2 sampler; surface area - 640 sq cm.
	UAPSP (08)									
		Alamo (12)	246a	35 47 32	89 08 03	112	00	10/81	10/82	Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982.
							01	10/82		
		Giles County (06)	155a	35 17 05	86 54 11	244	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	6/80	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 155b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site. Station TERMINATED on June 30, 1980.
		Giles County-2 (06 smplr 2)	155b	35 17 05	86 54 11	244	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	1/80	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 155a. The second sampler was removed after one year, this ADS number DISCONTINUED.
	EPA-IV (13)									
		Center Hill (TNCENTERH1)	264a	36 02 20	85 43 59	305	00	8/82	10/83	Samples analyzed by RTI
							01	10/83		Samples analyzed by Global Geochem after 10/1/83
	TVA (16)									
		ALLEN 7 (ALLEN 7)	383a	35 05 49	90 04 56	73	00	11/78		Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		BULL RUN 8 (BULL RUN 8)	384a	35 58 52	84 13 32	250	00	11/78	8/81	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		CUMBERLAND 1 (CUMBERLA 1)	387a	36 26 23	87 36 17	180	00	6/77	12/80	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		CUMBERLAND 14 (CUMBERLA14)	391a	36 16 20	87 45 53	0	00	6/77	9/80	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		CUMBERLAND 16 (CUMBERLA16)	392a	36 31 14	87 33 48	174	00	6/77	9/80	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		CUMBERLAND 18 (CUMBERLA18)	393a	36 27 58	87 34 52	216	00	6/77	9/80	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
		CUMBERLAND 21 (CUMBERLA21)	395a	36 10 13	87 50 50	0	00	7/77	12/79	Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).

- 95 -

4-Sep-1985  
Page 15

STATE

## NETWORK

**SITE NAME****ADS  
SITE  
IDEN**

LATITUDE LONGITUDE  
d m s d m s

**ELEV**

REV	REV	REV
NUM	START	END

### OPERATING HISTORY

Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
0 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
0 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
0 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
1 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
1 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
1 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
0 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).  
1 Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).

0 Operated by TVA network using AEC wet/dry

0 Operated by TVA network using AEC wet/dry

0 Operated by TVA network using AEC wet/dry

1 Operated by TVA network using AEC wet/dry

Operated by TVA network using AEC wet/dry

Operated by TVA network using AEC wet/dry

1. Operated by TVA network using AEC wet/dry

Operated by TVA network using AEC wet/dry

Operated by TVA network using AEC wet/dry

Operated by TVA network using ABC wet/dry

NADP (01)

Operated under normal UAPSP sampling protocol beginning in last quarter of 1981. Strong acid analysis discontinued on Sept 30, 1982. Co-located sampler 248b began operations on 10/9/83. Start of operation as co-located sampler to site 248a on 10/9/83.

**UAPSP (08)**

Strong acid analysis discontinued on Sept 30, 1982. Co-located sampler 248b began operations on 10/9/83.  
Start of operation as co-located sampler to site 248a on 10/9/83.

Virginia (51)

NADP (01)

On 15 June 82 site moved approximately 1.5km W to a more accessible location. No change made to NET ident or ADS ident.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 16

Virginia, NADP, Horton's Station

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
		Horton's Station (481300)	073a	37 20 06	80 33 28	1051	00	7/78		Site is considered nonstandard by NADP because location of collector does not follow siting guidelines.
	MAP3s/PCN (06)	Virginia (4)	072a	38 02 23	78 32 31	172	00	12/76	8/77	This MAP3S/PCN site started operation with the Battelle Northwest collector, surface area = 490 sq cm.
							01	8/77	9/77	Analysis method changed starting 4-aug-77. NH4 changed from Colorimetry to Ion Chromatography. NA and K changed from Flame Emission Spectrophory to Ion Chromatography.
							02	9/77	4/81	Analysis method changed; new method in use after September 1977. CA and MG changed from Flame Emission Spectrometry to Flame Atomic Absorbition on September 14, 1977. SO4 changed from Colorimetry to Collimetry with field fixation starting 9/6/77.
							03	4/81		Sample collection instrument changed from Battelle Northwest to Aerochem Metrics model 302-A2 with surface area = 640 sq cm.
	TVA (16)	LOVES MILL (LOVES MILL)	412a	36 44 12	81 41 13	663	00	5/78		Operated by TVA network using AEC wet/dry collector without rain gage Note that collection period is 2 weeks (Fortnightly).
West Virginia (54)	NADP (01)	Babcock State Park (500460)	379a	37 58 47	80 56 59	631	00	9/83		
		Parsons (501860)	075a	39 05 23	79 39 44	305	00	7/78		
	UAPSP (08)	Lewisburg (09)	158a	37 50 50	80 25 00	701	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	12/80	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 158b. Starting 1/1/80 only one sampler in operation at this EPRI/SURE site. Station TERMINATED on December 31, 1980.
		Lewisburg-2 (09 smplr 2)	158b	37 50 50	80 25 00	701	00	8/78	1/79	Start up phase for this EPRI/SURE site DO NOT USE DATA
							01	1/79	12/79	EPRI/SURE operation in CY 1979 with co-located samplers at this site. See 158a. The second sampler was removed after one year, this ADS number DISCONTINUED.
Wisconsin (55)	NADP (01)	Lake Dubay (512800)	283a	44 39 53	89 39 08	338	00	6/82		
		Lake Geneva (513680)	328b	88 30 01	42 34 49	290	00	6/84		This NADP/NTN site was formerly operated by WISC on a daily sampling protocol. See ADS ident 328a.
		Spooner (513700)	077a	45 49 21	91 52 30	331	00	6/80		
		Trout Lake (513640)	076a	46 03 09	89 39 11	501	00	1/80		

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 17

Wisconsin, GLAD, Cornucopia

STATE	NETWORK	SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
GLAD (14)										
		Cornucopia (510180001)	322a	46 51 44	91 08 13	195	00	2/81		
		Green Bay (510360001)	323a	44 31 47	87 55 11	201	00	3/81		
		Manitowoc (513600001)	324a	44 03 56	87 39 23	189	00	7/81		
		Milwaukee (512200035)	325a	43 04 31	87 53 02	205	00	3/81		
WISC (15)										
		Geneva Lake (GENEVA)	328a	42 34 48	88 30 03	27	00	3/82	4/83	Aluminum analysis on precipitation samples was performed.
							01	4/83	9/83	Aluminum analysis on precipitation samples discontinued.
							02	9/83	1/84	Markson Model 4503 SelectroMark pH and conductivity meter replaced with a Fisher Accumet pH meter and YSI Model 35 conductivity meter.
							03	1/84	5/84	Atomic absorption analysis discontinued; plasma emission spectroscopy used for calcium and magnesium analysis. Operation as WISC site ended 5/31/84. See follow-on operation as site 328b under NADP/NTN weekly sampling protocol.
		Legend Lake (LEGEND)	327a	44 53 30	88 37 47	27	00	4/82	4/83	Aluminum analysis on precipitation samples were performed.
							01	4/83	11/83	Aluminum analysis on precipitation samples were discontinued.
							02	11/83	12/83	Bulk sample collection through 12-28-83.
							03	12/83	5/84	Site was repeatedly vandalized. New collectors and rain gauges were installed. Atomic absorption analysis discontinued; plasma emission spectroscopy used for calcium and magnesium analysis. Site down between 2-27-84 and 3-16-84. However, no events were recorded during this period. Site TERMINATED on 5/31/84.
		Round Lake (ROUND)	326a	46 13 24	91 56 10	32	00	8/82	4/83	Aluminum analysis on precipitation samples was performed.
							01	4/83	7/83	Aluminum analysis on precipitation samples was discontinued.
							02	7/83	11/83	Markson Model 4503 SelectMark pH meter replaced with Corning Model 125 pH meter.
							03	11/83	1/84	Markson conductivity bridge replaced with YSI Model 35 conductivity meter.
							04	1/84	5/84	Atomic absorption analysis discontinued; plasma emission spectroscopy analysis used for calcium and magnesium analysis. Site TERMINATED on 5/31/84.
New Brunswick (83)										
		CANSAP (05)								
		Acadia Fes (09 010)	090a	46 00 00	66 22 00	61	00	11/79	1/80	Collector: Sangamo model C
							01	1/80		On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 18

New Brunswick, CANSAP, Charlo

STATE  
NETWORK  
SITE NAME

ADS  
SITE IDENT LATITUDE LONGITUDE ELEV ADS  
d m s d m s m rev num REV REV  
START END

OPERATING HISTORY

Charlo (09 000)

081a 48 00 00 66 20 00 38 00 5/77 3/79 Sampler is either Sangamo model A or B  
01 3/79 1/80 Collector: Sangamo model C  
02 1/80 1/83 On 1/1/80, the use of a single bucket for  
entire month was DISCONTINUED. Subsequent  
samples are composited in the field. Sample  
collection operations TERMINATED 1/1/83.  
St. John (09 020) 119a 45 19 00 65 53 00 109 00 5/77 3/79 Sampler is either Sangamo model A or B  
01 3/79 1/80 Collector: Sangamo model C  
02 1/80 1/83 On 1/1/80, the use of a single bucket for  
entire month was DISCONTINUED. Subsequent  
samples are composited in the field. Sample  
collection operations TERMINATED 1/1/83.

Newfoundland (84)

CANSAP (05)

Gander (12 010)

097a 48 57 00 54 34 00 151 00 5/77 3/79 Sampler is either Sangamo model A or B  
01 3/79 1/80 Collector: Sangamo model C  
02 1/80 1/83 On 1/1/80, the use of a single bucket for  
entire month was DISCONTINUED. Subsequent  
samples are composited in the field. Sample  
collection operations TERMINATED 1/1/83.  
Goose (12 000) 098a 53 19 00 60 25 00 36 00 7/77 3/79 Sampler is either Sangamo model A or B  
01 3/79 1/80 Collector: Sangamo model C  
02 1/80 1/83 On 1/1/80, the use of a single bucket for  
entire month was DISCONTINUED. Subsequent  
samples are composited in the field. Sample  
collection operations TERMINATED 1/1/83.  
Stephenville (12 020) 123a 48 32 00 58 33 00 26 00 5/77 3/79 Sampler is either Sangamo model A or B  
01 3/79 1/80 Collector: Sangamo model C  
02 1/80 On 1/1/80, the use of a single bucket for  
entire month was DISCONTINUED. Subsequent  
samples are composited in the field.

APN (09)

Baie d'Espoir (12 030)

145a 47 59 00 55 48 00 23 00 11/81 This APN site started operation with the  
Sangamo model C collector.

Nova Scotia (86)

NADP (01)

Kejimikujik (c) (775048)

103c 44 25 58 65 12 20 152 00 5/81 4/84 Co-located with APN site 103b. NADP  
comparison site with CANSAP network, April  
1981 - April 1984. See ADS ident 103a.  
Comparison involved the comparability of U.S.  
and Canadian data. Operations TERMINATED on  
4/3/84.

CANSAP (05)

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 19

Nova Scotia, CANSAP, Kejimikujik (a)

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	rev	num	START	END	
SITE NAME	IDENT								
Kejimikujik (a) (10 020)	103a	44 25 58	65 12 20	127	00	6/78	3/79		Sampler is either Sangamo model A or B. See co-located APN daily sampler, site 103b. Sampler is either Sangamo model A or B. See co-located APN daily sampler, site 103b. See also the co-located NADP weekly collector at site 103c.
					01	3/79	1/80		Collector: Sangamo model C. See co-located APN daily sampler, site 103b. See also the co-located NADP weekly collector at site 103c.
					02	1/80	4/84		On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. See co-located APN daily sampler, site 103b. Sample collection operations TERMINATED 4/1/84. See also the co-located NADP weekly collector at site 103c.
Sable Island (10 010)	117a	43 56 00	60 01 00	4	00	3/75	3/79		Sampler is either Sangamo model A or B
					01	3/79	1/80		Collector: Sangamo model C
					02	1/80	1/83		On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Shelburne (10 030)	121a	43 43 00	65 15 00	30	00	1/76	3/79		Sampler is either Sangamo model A or B
					01	3/79	1/80		Collector: Sangamo model C
					02	1/80	1/83		On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Truro (10 000)	127a	45 22 00	63 16 00	40	00	5/77	3/79		Sampler is either Sangamo model A or B
					01	3/79	1/80		Collector: Sangamo model C
					02	1/80			On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field.
APN (09)									
Kejimikujik (b) (10 019)	103b	44 25 58	65 12 20	152	00	5/79			This APN site started operation with the Sangamo model C collector. See co-located CANSAP monthly sampler, site 103a. See also the co-located NADP weekly collector at site 103c.
Ontario (87)									
NADP (01)									
Mount Forest (b) (776000)	110b	43 59 29	80 44 46	410	00	5/81	3/84		NADP comparison site with CANSAP network, April 1981 - April 1984. See ADS ident 110a. Comparison involved the comparability of U.S. and Canadian data. Operations TERMINATED on 3/20/84.
CANSAP (05)									
Armstrong (07 140)	287a	50 17 00	88 54 00	323	00	2/74	11/76		

100

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 20

Ontario, CANSAP, Atikokan

STATE NETWORK SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
Atikokan (07 050)	079a	48 45 00	91 37 00	393	00 01 02	4/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Dorset (a) (07 060)	087a	45 13 00	78 56 00	319	00 01	7/79 1/80	1/80	Collector: Sangamo model C See co-located APIOS daily sampler, site 087b. See co-located APIOS monthly sampler, site 087c. On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. See co-located APIOS daily sampler, site 087b. See co-located APIOS monthly sampler, site 087c.
ELA (a) (07 023)	135a	49 40 00	93 43 00	368	00 01	8/79 1/80	1/80	Collector: Sangamo model C See co-located APN daily sampler, site 135b. On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. See co-located APN daily sampler, site 135b.
Harrow (07 120)	100a	42 02 00	82 54 00	191	00	12/79	1/83	On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Kapuskasing (07 030)	102a	49 24 00	82 26 00	227	00 01	10/79 1/80	1/80	Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field.
Kingston (07 070)	106a	44 13 00	76 36 00	92	00 01 02	5/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Moosonee (07 010)	109a	51 16 00	80 39 00	10	00 01 02	6/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Mount Forest (a) (07 090)	110a	43 59 29	80 44 46	415	00 01 02	7/73 3/79 1/80	3/79 1/80 1/80	Sampler is either Sangamo model A or B. CANSAP site 110a is co-located with NADP site 110b for intercomparison. Collector: Sangamo model C. CANSAP site 110a is co-located with NADP site 110b for intercomparison. On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. CANSAP site 110a is co-located with NADP site 110b for intercomparison.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 21

Ontario, CANSAP, Peterborough

STATE NETWORK SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
Peterborough (07 080)	112a	44 14 00	78 21 00	191	00 01 02	6/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Pickle Lake (07 020)	113a	51 28 00	90 12 00	369	00 01 02	2/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Simcoe (07 110)	122a	42 51 00	80 16 00	241	00 01 02	6/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Trout Lake (07 000)	126a	53 50 00	89 52 00	220	00 01 02	5/77 3/79 1/80	3/79 1/80 1/83	Sampler is either Sangamo model A or B Collector: Sangamo model C On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Wawa (07 130)	129a	47 58 00	84 47 00	287	00 01	5/77 3/79	3/79 9/79	Sampler is either Sangamo model A or B NOT SURE OF HISTORY IN THIS TIME PERIOD
Windsor (07 150)	131a	42 16 00	82 58 00	190	00 01	6/77 3/79	3/79 11/79	Sampler is either Sangamo model A or B NOT SURE OF HISTORY IN THIS TIME PERIOD
APIOs-D (07) Balsam Lake (3031)	225a	44 37 35	78 51 22	259	00 01 02 03 04	11/80 2/81 5/81 5/81 5/82	2/81 5/81 11/81 5/82	Warm weather collector = Aerochem Metrics 301 with standard rain gauge. Cold weather collector = SES BULK sampler and Nepher shielded gauge Warm weather collector = Aerochem Metrics 301 with standard rain gauge. Cold weather collector = SES BULK sampler and Nepher shielded gauge
Charleston Lake (4011)	227a	44 29 54	76 02 30	92	00 01 02 03	1/81 5/81 11/81 4/82	5/81 11/81 4/82	Warm weather collector and gauge Cold weather collector = SES BULK sampler and Nepher shielded gauge Warm weather collector = Aerochem Metrics 301 with standard rain gauge. Cold weather collector = SES BULK sampler and Nepher shielded gauge Warm weather collector and gauge

102



Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 22

Ontario, APIOS-D, Dorset (b)

STATE NETWORK SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
Dorset (b) (3011)	087b	45 13 23	78 55 49	320	00	7/80	1/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge. See co-located CANSAP monthly sampler, site 087a. See co-located APIOS monthly sampler, site 087c.
					01	1/81	5/81	Cold weather collector = SES BULK sampler and Nepher shielded gauge See co-located CANSAP monthly sampler, site 087a. See co-located APIOS monthly sampler, site 087c.
					02	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge. See co-located CANSAP monthly sampler, site 087a. See co-located APIOS monthly sampler, site 087c.
					03	11/81	4/82	Cold weather collector = SES BULK sampler and Nepher shielded gauge See co-located CANSAP monthly sampler, site 087a. See co-located APIOS monthly sampler, site 087c.
					04	4/82		Warm weather collector and gauge See co-located CANSAP monthly sampler, site 087a. See co-located APIOS monthly sampler, site 087c.
Forbes Twsp. (6081)	234a	48 34 58	89 38 56	324	00	9/81	10/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					01	10/81	5/82	Cold weather collector = SES BULK sampler and Nepher shielded gauge
					02	5/82		Warm weather collector and gauge
Graham Lake (4031)	229a	44 35 22	75 51 44	130	00	10/80	2/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					01	2/81	5/81	Cold weather collector = SES BULK sampler and Nepher shielded gauge
					02	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					03	11/81	5/82	Cold weather collector = SES BULK sampler and Nepher shielded gauge
					04	5/82		Warm weather collector and gauge
Lac Le Croix (b) (6061)	208b	48 21 14	92 12 32	368	00	9/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge. See co-located APIOS monthly sampler, site 208a.
					01	11/81	5/82	Cold weather collector = SES BULK sampler and Nepher shielded gauge See co-located APIOS monthly sampler, site 208a.
					02	5/82		Warm weather collector and gauge See co-located APIOS monthly sampler, site 208a.

103

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 23

Ontario, APIOS-D, Longwoods (b)

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	rev	num	START	END
SITE NAME	IDENT							
Longwoods (b) (1011)	143b	42 53 02	81 28 50	239	00	7/80	1/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge. See co-located APN daily sampler, site 143a.
					01	1/81	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge See co-located APN daily sampler, site 143a.
					02	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge. See co-located APN daily sampler, site 143a.
					03	11/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge See co-located APN daily sampler, site 143a.
					04	5/82		Warm weather collector and gauge See co-located APN daily sampler, site 143a.
Melbourne (1021)	221a	42 47 15	81 33 23	213	00	11/80	2/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					01	2/81	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					02	5/81	12/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					03	12/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					04	5/82		Warm weather collector and gauge
Nithgrove (3021)	224a	45 12 01	79 04 14	335	00	1/81	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					01	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					02	11/81	4/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					03	4/82		Warm weather collector and gauge
North Easthope (1031)	222a	43 24 21	80 53 35	375	00	11/80	1/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					01	1/81	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					02	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					03	11/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					04	5/82		Warm weather collector and gauge
Quetico Centre (6071)	233a	48 24 44	91 12 08	420	00	10/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					01	5/82		Warm weather collector and gauge
Railton (4021)	228a	44 22 34	76 35 33	137	00	7/80	1/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					01	1/81	4/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					02	4/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					03	11/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					04	5/82		Warm weather collector and gauge

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 24

Ontario, APIOS-D, Raven Lake

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	num	START	END	
SITE NAME	IDENT							
Raven Lake (3041)	226a	44 36 40	78 54 43	274	00	2/81	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					01	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					02	11/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
Wellesley (2011)	223a	43 28 13	80 45 35	344	03	5/82		Warm weather collector and gauge
					00	1/81	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					01	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					02	11/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
Whitman Creek (4041)	230a	44 29 07	76 49 19	137	03	5/82		Warm weather collector and gauge
					00	10/80	11/80	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					01	11/80	5/81	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					02	5/81	11/81	Warm weather collector = Aerochem Metrics 301 with standard rain gauge.
					03	11/81	5/82	Cold weather collector = SES BULK sampler and Nephher shielded gauge
					04	5/82		Warm weather collector and gauge
APN (09)								
Algoma (07 054)	140a	47 06 00	84 06 00	265	00	9/80		This APN site started operation with the Sangamo model C collector.
Chalk River (07 056)	141a	46 06 00	77 24 00	122	00	11/78	3/79	Sampler is either Sangamo model A or B
					01	3/79		Collector: Sangamo model C
ELA (b) (07 024)	135b	49 40 00	93 43 00	368	00	11/78	3/79	Sampler is either Sangamo model A or B See co-located CANSAP monthly sampler, site 135a.
					01	3/79		Collector: Sangamo model C See co-located CANSAP monthly sampler, site 135a.
Long Point (07 094)	142a	42 60 00	80 50 00	175	00	11/78	11/82	This APN site started operation with the Sangamo model C collector. Site moved to ADS ident 143a on 11/30/82.
Longwoods (a) (07 100)	143a	42 53 00	81 29 00	239	00	12/82		This APN site started operation with the Sangamo model C collector. See co-located APIOS daily sampler, site 143b.
APIOS-C (12)								
Alvinston (1081)	180a	42 49 36	81 50 04	221	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982

105

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 25

Ontario, APIOS-C, Attawapiskat

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	rev	num	START	END
SITE NAME	IDENT							
Attawapiskat (5081)	202a	52 56 00	82 24 00	9	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82	2/84	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Azure Lake (5151)	417a	47 28 12	81 52 30	244	00	7/83		Site replaced ADS site 199a in July, 1983.
Bear Island (5041)	198a	46 58 22	80 04 40	305	00	5/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Campbellford (3081)	189a	44 17 28	77 47 33	175	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Cloyne (4091)	418a	44 49 09	77 11 45	259	00	12/84		Site replaced ADS site 191a in December, 1984.
Colchester (1041)	176a	41 59 15	82 55 41	183	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Coldwater (3101)	190a	44 37 31	79 32 08	280	00	8/81	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Dalhousie Mills (4071)	193a	45 19 00	74 28 13	69	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Dorion (6011)	204a	48 50 33	88 36 45	244	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982

106

**Wet Deposition Site History Inventory  
Ordered by State and Province**

4-Sep-1985  
Page 26

Ontario, APIOS-C, Dorset (c)

STATE NETWORK SITE NAME	ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
Dorset (c) (3011)	087c	45 13 26	78 55 52	320	00	5/80	1/82	Sample collected on last working day of each month. See co-located CANSAP monthly sampler, site 087a. See co-located APIOS daily sampler, site 087b.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time. See co-located CANSAP monthly sampler, site 087a. See co-located APIOS daily sampler, site 087b.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982 See co-located CANSAP monthly sampler, site 087a. See co-located APIOS daily sampler, site 087b.
Ear Falls (6031)	206a	50 38 31	93 13 13	350	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Expt. Lake Area (6091)	210a	49 39 22	93 43 28	123	00	10/81	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Geraldton (6121)	416a	49 48 05	86 46 00	351	00	8/83		Site replaced ADS site 205a in August, 1983.
Golden Lake (4081)	194a	45 36 48	77 12 03	160	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Gowganda (5061)	200a	47 39 04	80 46 32	343	00	7/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Huron Park (1191)	183a	43 17 28	81 30 03	250	00	10/81	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982

- 107 -

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 27

Ontario, APIOS-C, Kaladar

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	rev	num	START	END
SITE NAME	IDENT							
Kaladar (4051)	191a	44 41 31	77 09 18	244	00	9/80	1/82	Sample collected on last working day of each month.
	01				01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	02				02	11/82	11/82	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Killarney (5021)	196a	45 59 26	81 29 18	183	00	5/80	1/82	Site replaced by ADS site 418a in December, 1984.
	01				01	1/82	11/82	Sample collected on last working day of each month.
	02				02	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
Lac Le Croix (a) (6061)	208a	48 21 14	92 12 32	368	00	12/81	1/82	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	01				01	1/82	11/82	Sample collected on last working day of each month. See co-located APIOS daily sampler, site 208b.
	02				02	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
Mattawa (5031)	197a	46 16 45	78 49 19	198	00	8/80	1/82	See co-located APIOS daily sampler, site 208b.
	01				01	1/82	11/82	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	02				02	11/82		Sample collected on last working day of each month.
McKellar (5011)	195a	45 30 57	79 55 19	244	00	8/80	1/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	01				01	1/82	11/82	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	02				02	11/82		Sample collected on last working day of each month.
Merlin (1051)	177a	42 14 47	82 13 30	191	00	9/80	1/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	01				01	1/82	11/82	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	02				02	11/82		Sample collected on last working day of each month.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 28

Ontario, APIOS-C, Milton

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	num	START	END	
SITE NAME	IDENT							
Milton (3051)	186a	43 31 05	79 55 54	221	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82	3/84	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Moonbeam (5071)	201a	49 19 16	82 08 46	244	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Nakina (6021)	205a	50 10 38	86 42 40	320	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82	7/83	food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
								Site replaced by ADS site 416a in August, 1983.
Palmerston (1101)	182a	43 48 19	80 54 12	389	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Pickle Lake (6041)	207a	51 27 41	90 12 04	360	00	7/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Port Stanley (1061)	178a	42 40 22	81 09 55	213	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Quetico Centre (6071)	209a	48 44 24	91 12 08	420	00	11/81	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 29

Ontario, APIOS-C, Ramsey

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	rev	START	END	
SITE NAME	IDENT				num			
Ramsey (5051)	199a	47 26 33	82 20 14	427	00	5/80	1/82	Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	02				11/82	7/83		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Shallow Lake (1091)	181a	44 34 54	81 05 24	229	00	9/80	1/82	Site replaced by ADS site 417a in July, 1983. Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	02				11/82			food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Smith's Falls (4061)	192a	44 56 41	75 57 48	122	00	9/80	1/82	Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	02				11/82			food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Turkey Lake (5141) Oxbridge (3061)	415a	47 03 15	84 24 00	472	00	9/83		
	187a	44 12 46	79 12 38	244	00	9/80	1/82	Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
Waterloo (2021)	02				11/82			food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	184a	43 28 39	80 35 09	343	00	9/80	1/82	Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
Whitney (5091)	02				11/82			food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	203a	45 32 21	78 15 35	412	00	9/80	1/82	Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
Wilberforce (3071)	02				11/82			food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
	188a	45 00 54	78 12 58	396	00	9/80	1/82	Sample collected on last working day of each month.
	01				1/82	11/82		Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
	02				11/82			food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982



Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 30

Ontario, APIOS-C, Wilkesport

STATE	ADS	LATITUDE	LONGITUDE	ELEV	ADS	REV	REV	OPERATING HISTORY
NETWORK	SITE	d m s	d m s	m	rev	START	END	
SITE NAME	IDENT				num			
Wilkesport (1071)	179a	42 42 11	82 21 13	183	00	9/80	1/82	Sample collected on last working day of each month.
					01	1/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					02	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Winisk (6101)	211a	55 12 00	85 08 00	9	00	7/82	11/82	Samples collected every 28 days (tuesday to tuesday) starting 1/5/82 at 8AM local time.
					01	11/82		food grade polyethylene/nylon laminate collection bags replaced polyethylene bags in November, 1982
Quebec (89)								
CANSAP (05)								
Chibougamau (08 030)	082a	49 49 00	74 25 00	402	00	4/77	3/79	Sampler is either Sangamo model A or B
					01	3/79	1/80	Collector: Sangamo model C
					02	1/80	6/82	On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 6/30/82.
Fort Chimo (08 000)	091a	58 06 00	68 25 00	36	00	5/77	3/79	Sampler is either Sangamo model A or B
					01	3/79	1/80	Collector: Sangamo model C
					02	1/80	11/82	On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 11/12/82.
Maniwaki (08 050)	108a	46 23 00	75 58 00	170	00	5/75	3/79	Sampler is either Sangamo model A or B
					01	3/79	1/80	Collector: Sangamo model C
					02	1/80		On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field.
Nitchequon (08 010)	111a	53 12 00	70 54 00	536	00	4/77	3/79	Sampler is either Sangamo model A or B
					01	3/79	1/80	Collector: Sangamo model C
					02	1/80	1/83	On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Quebec City (08 040)	116a	46 48 00	71 24 00	73	00	5/77	3/79	Sampler is either Sangamo model A or B
					01	3/79	1/80	Collector: Sangamo model C
					02	1/80	1/83	On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 1/1/83.
Sept Isles (08 020)	120a	50 13 00	66 15 00	55	00	4/77	3/79	Sampler is either Sangamo model A or B
					01	3/79	1/80	Collector: Sangamo model C
					02	1/80		On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field.

Wet Deposition Site History Inventory  
Ordered by State and Province

4-Sep-1985  
Page 31

Quebec, CANSAP, St. Hubert

STATE

NETWORK

SITE NAME

St. Hubert (08 060)

APN (09)

Montmorency (08 034)

ADS SITE IDENT	LATITUDE d m s	LONGITUDE d m s	ELEV m	ADS rev num	REV START	REV END	OPERATING HISTORY
118a	45 31 00	73 25 00	27	00	5/77	3/79	Sampler is either Sangamo model A or B
				01	3/79	1/80	Collector: Sangamo model C
				02	1/80	11/82	On 1/1/80, the use of a single bucket for entire month was DISCONTINUED. Subsequent samples are composited in the field. Sample collection operations TERMINATED 11/30/82.
144a	47 19 00	71 09 00	640	00	12/80		This APN site strated operation with the Sangamo model C collector.

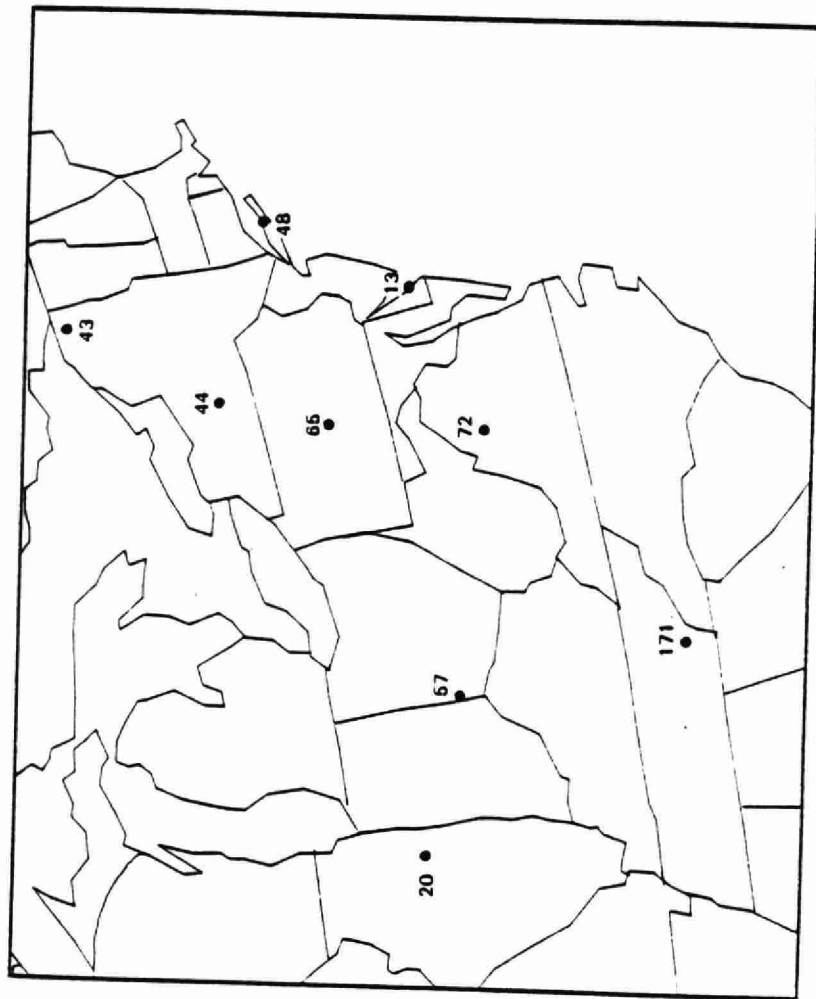


Figure E-1: MAP3S Network Sites

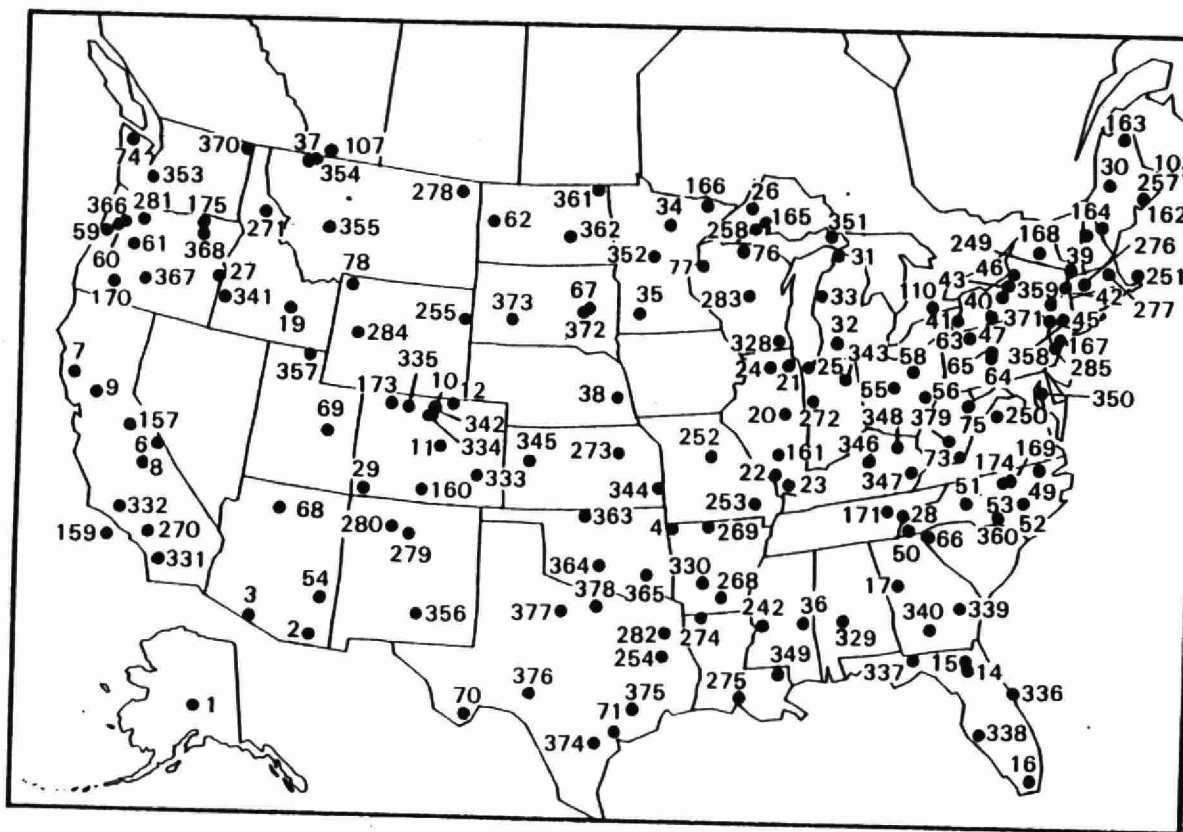


Figure E-2: NADP/NTN Network Sites

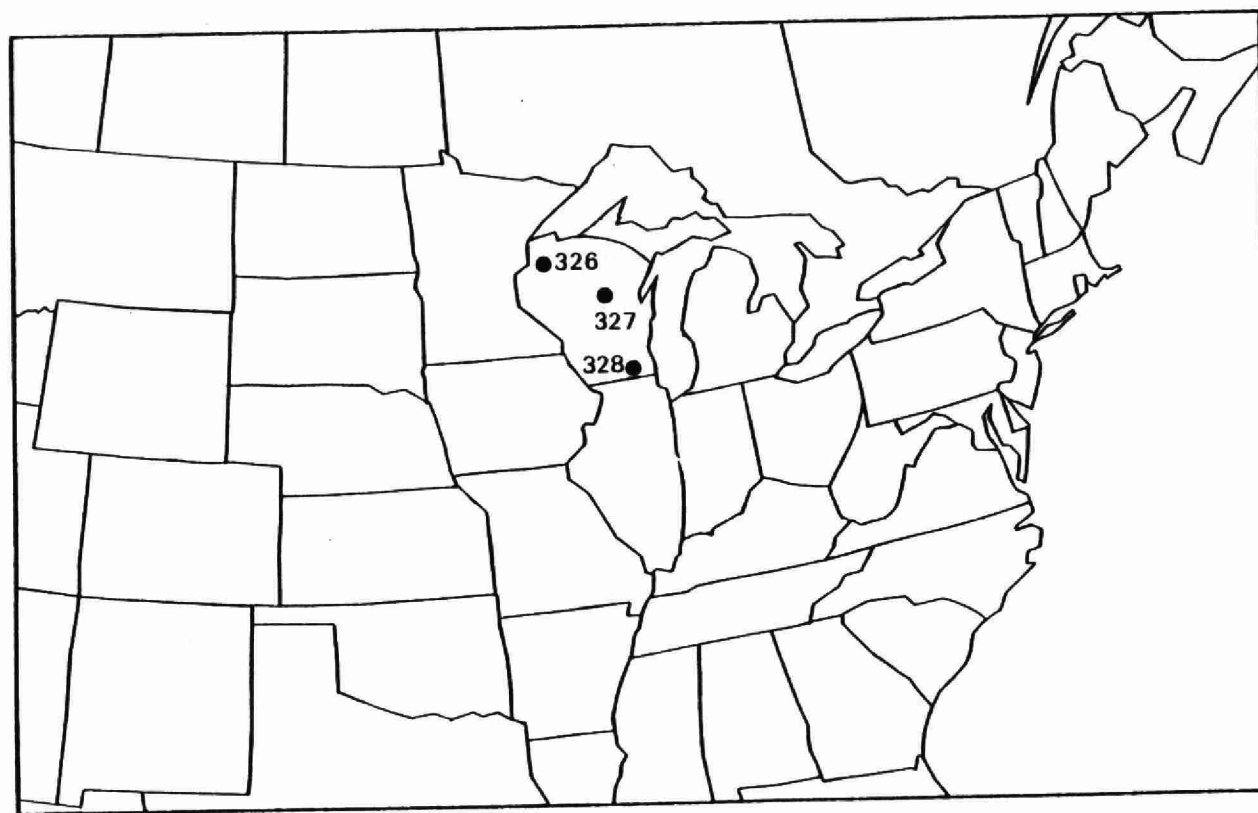


Figure E-3: Wisconsin Network Sites

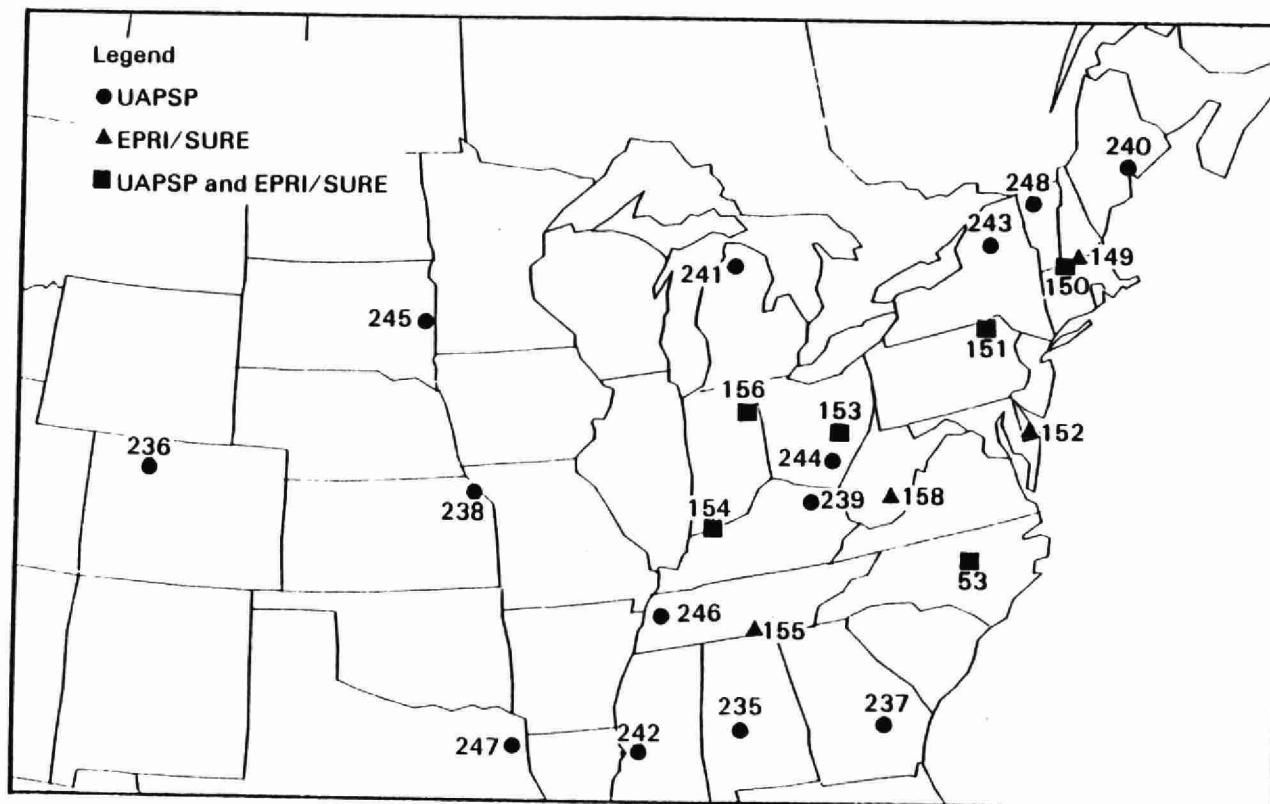


Figure E-Y: UAPSP and EPRI/SURE Network Sites

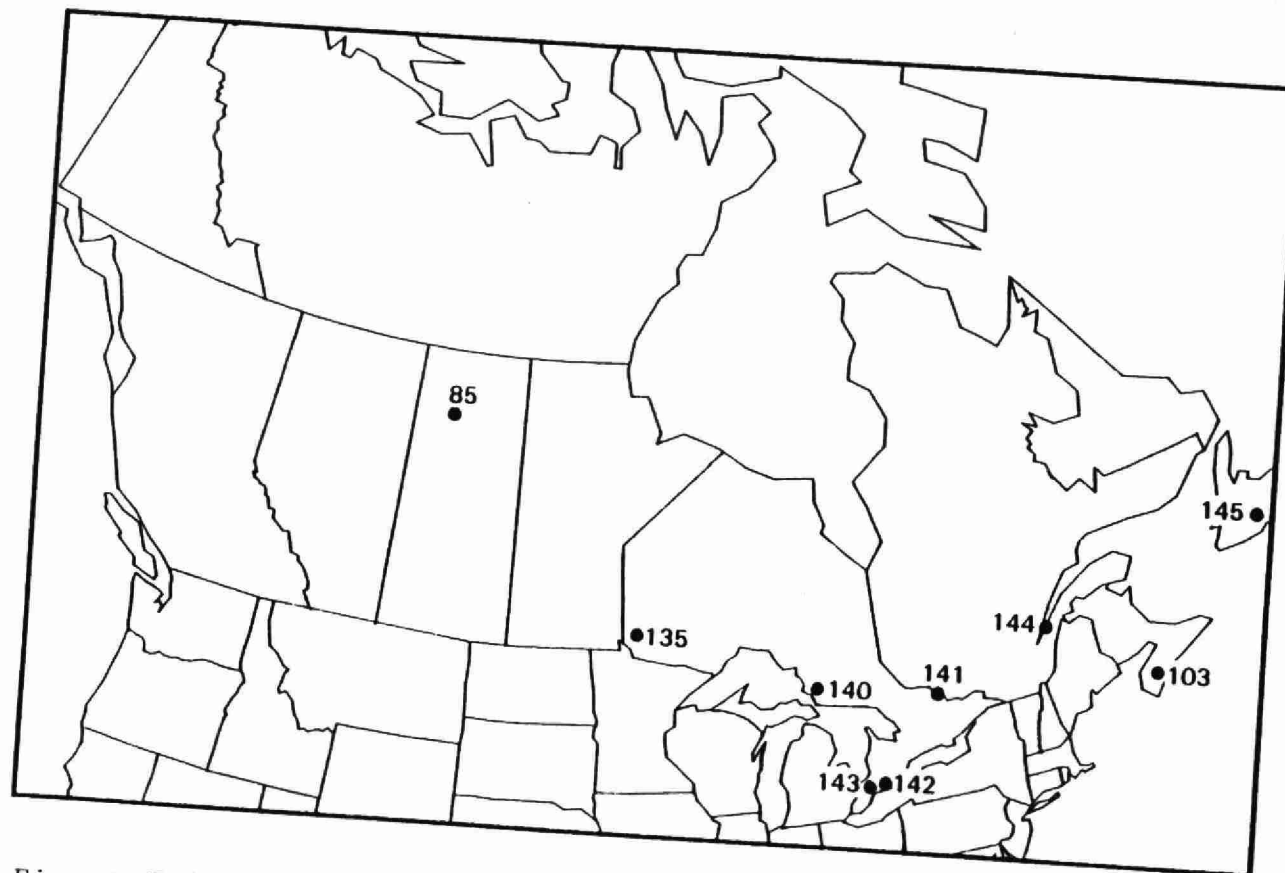


Figure E-5: APN Sites

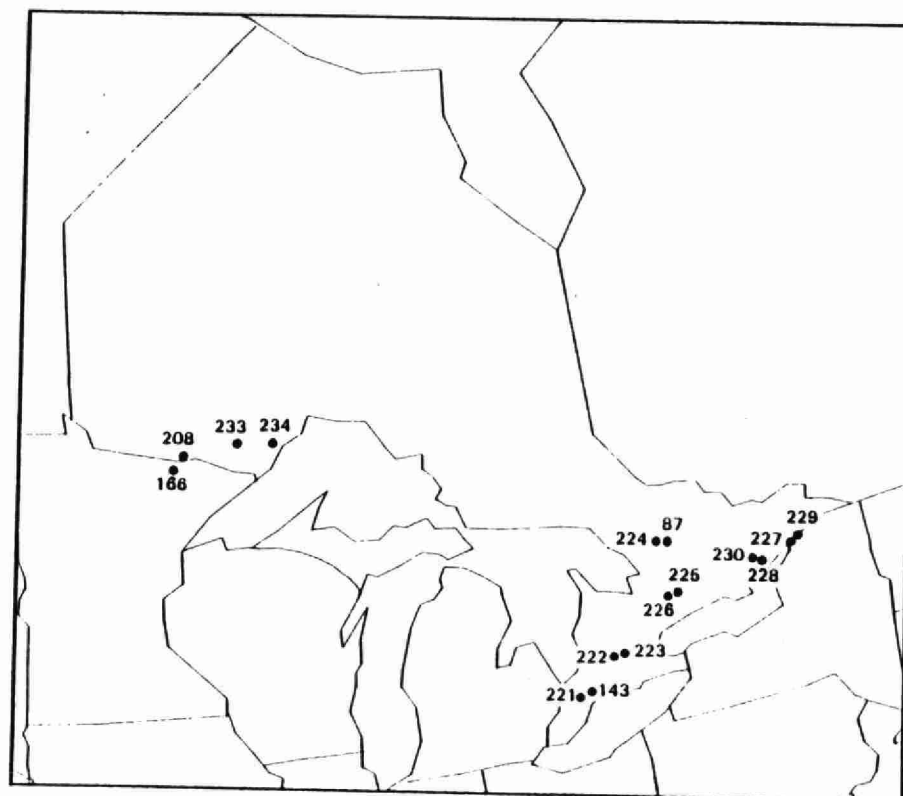


Figure E-6: APIOS Network Daily Monitoring Sites



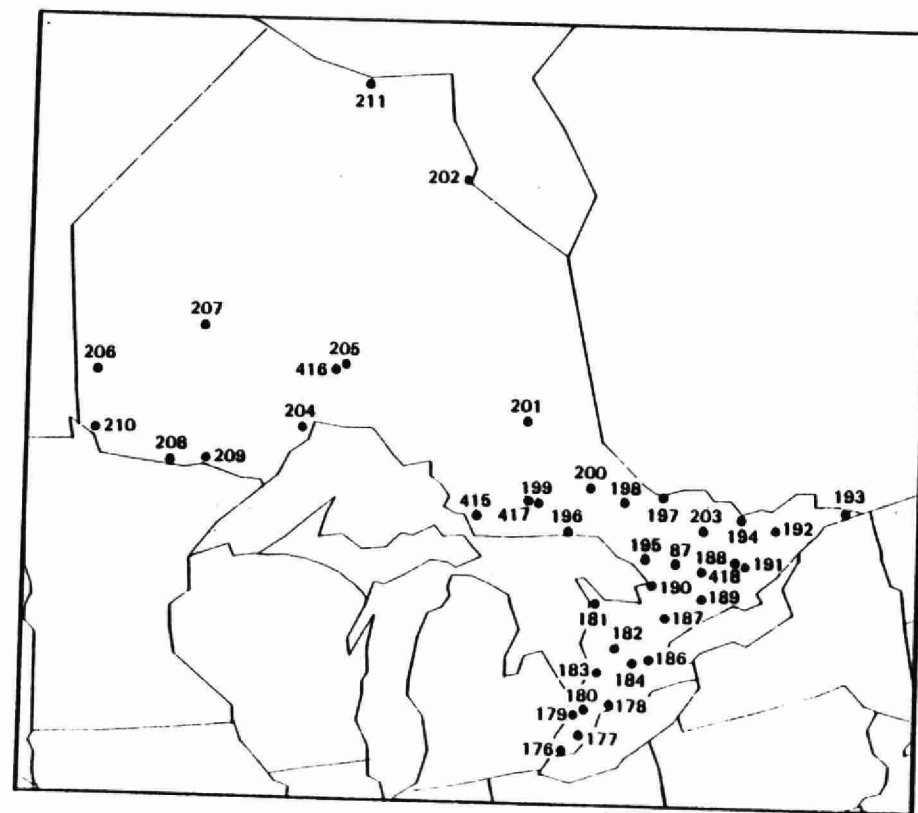


Figure E-7: APIOS Network Cumulative Monitoring Sites

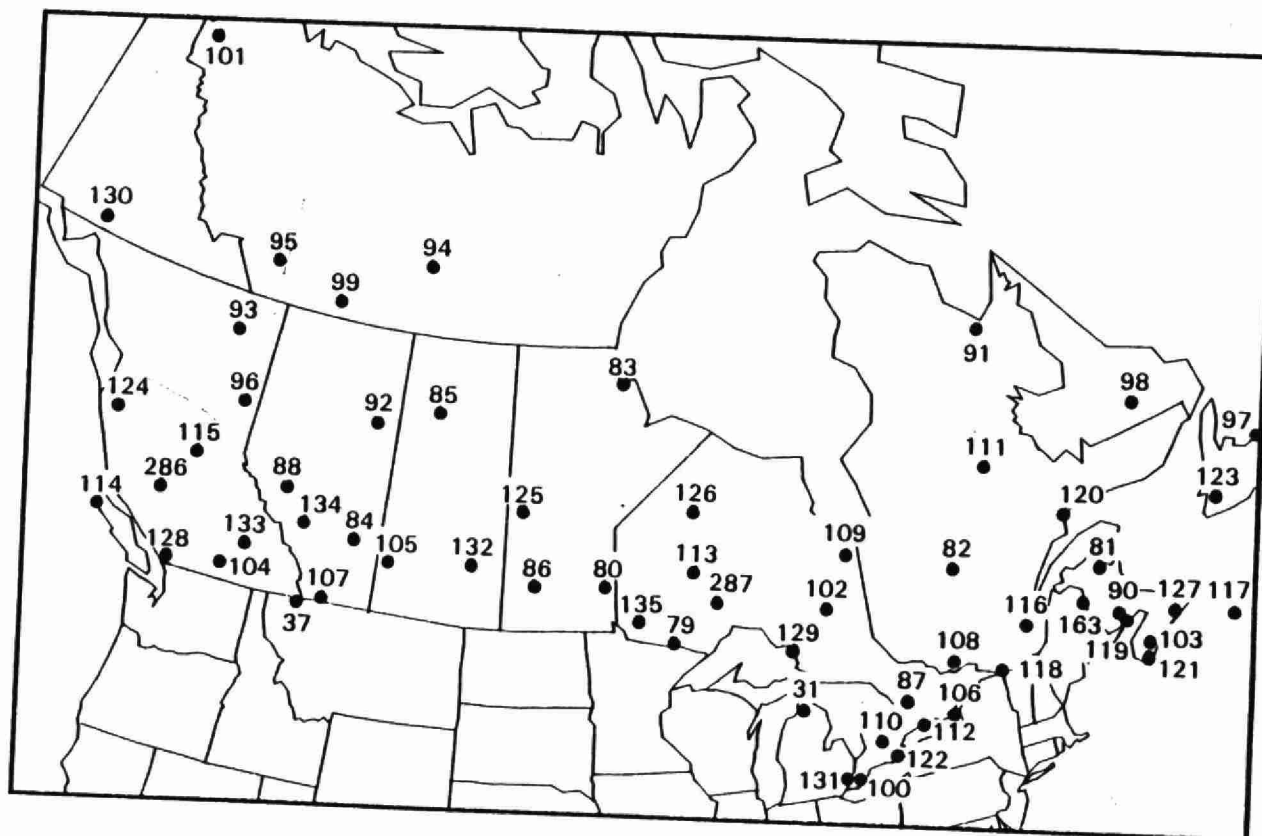


Figure E-8: CANSAP Sites

( 1 1 1 1 1 )



26